

Figure 1 - Process Control System

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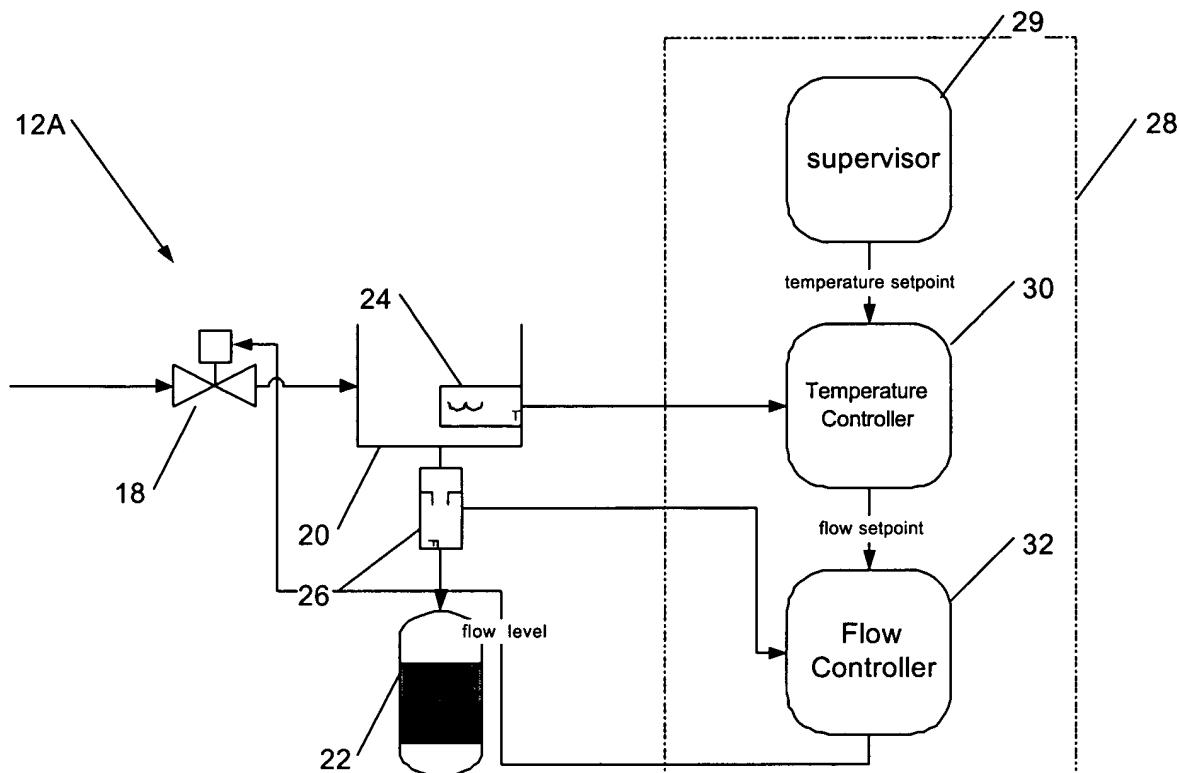


Figure 2 - Exemplary Controlled Process

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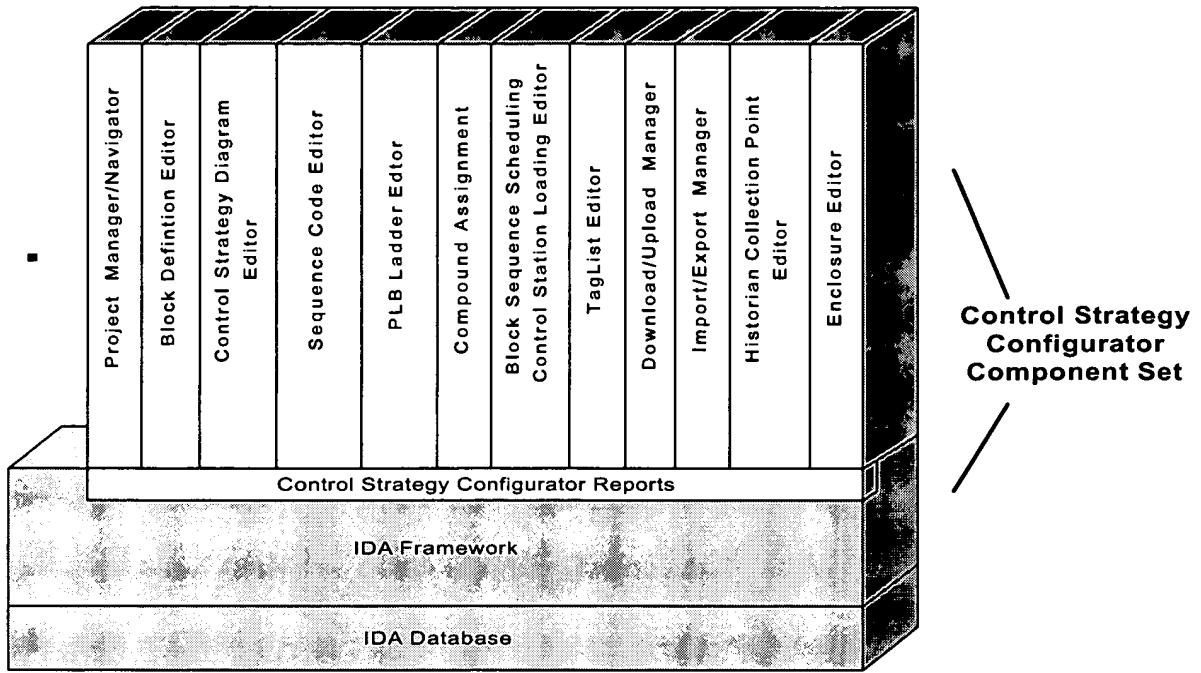


Figure 3 - Control Strategy Configurator Components

E K 0 4 4 2 0 0 7 7 9 U S

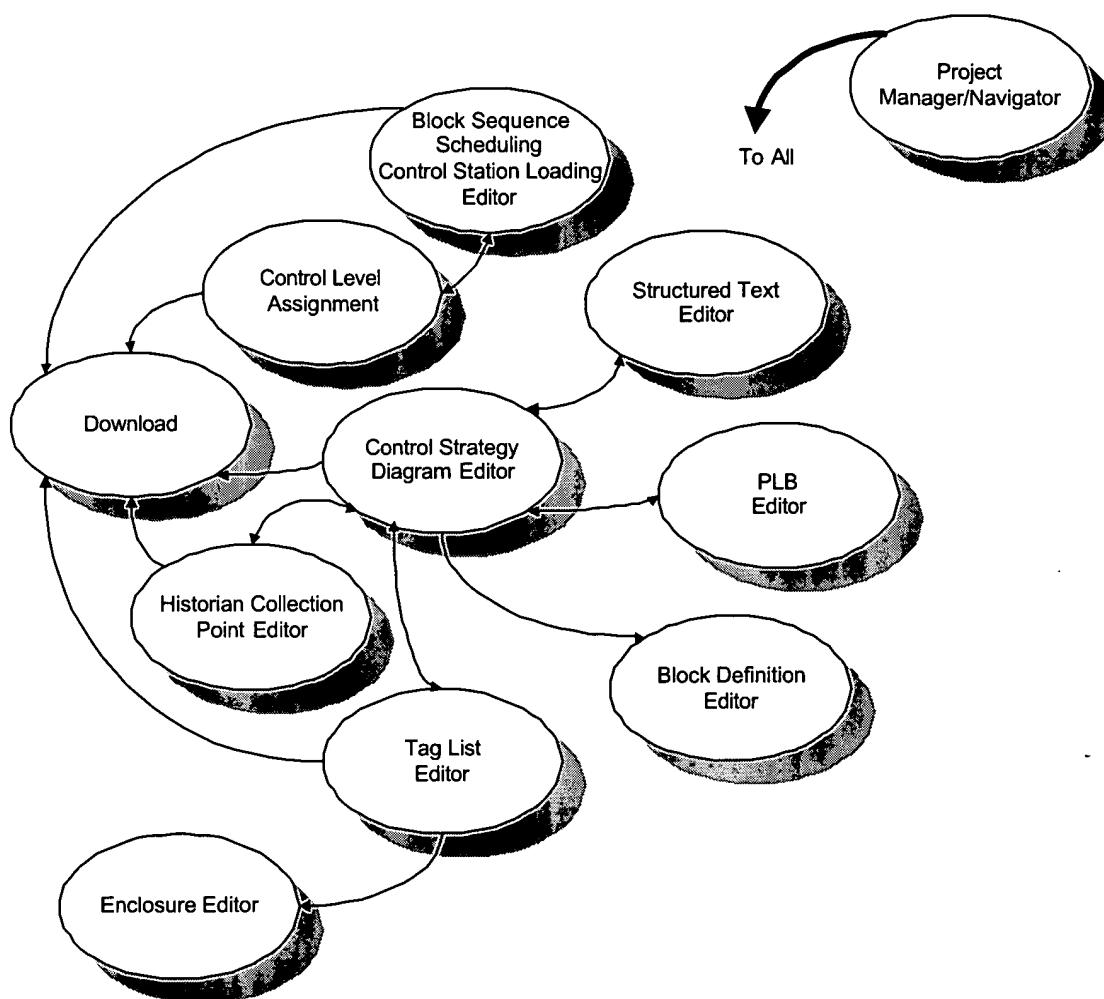


Figure 4 - Component Interaction Diagram

E K 0 4 4 2 0 0 7 7 9 U S

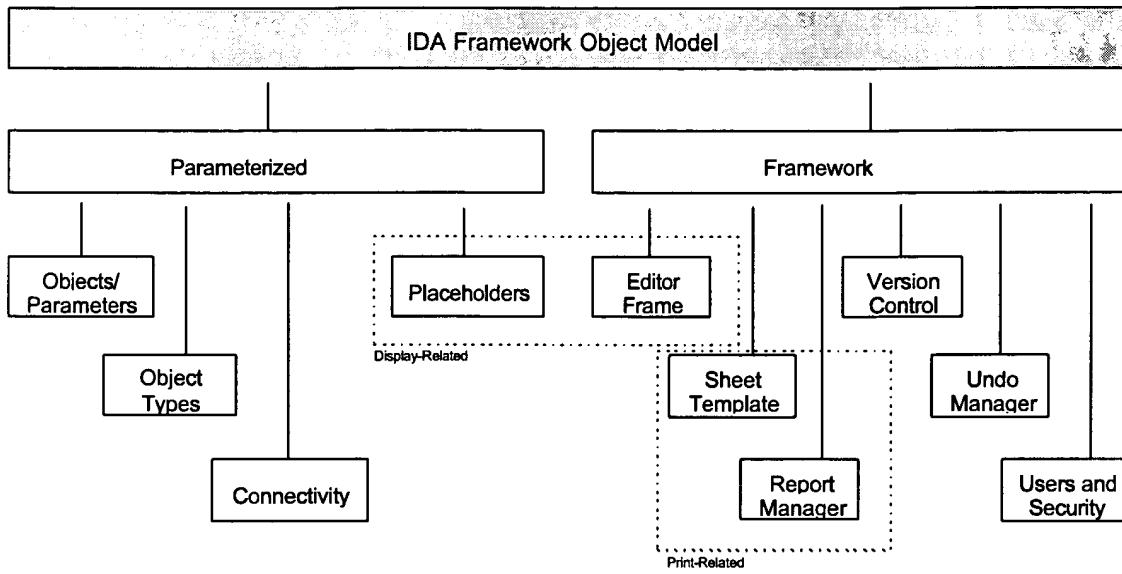
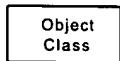
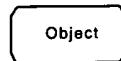


Figure 5 - IDA Framework Object Model Components

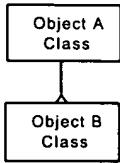
E K 0 4 4 2 0 0 7 7 9 U S



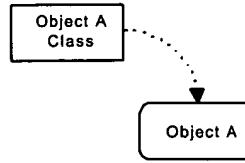
Indicates an object class.



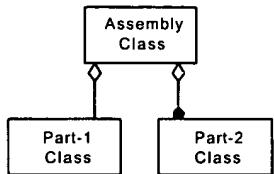
Indicates an instance of Object Class.



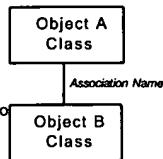
Inheritance - Object B inherits all data and behavior of Object A. Object B differs from Object A by adding methods and/or data, or overriding one or more existing methods in Object A. Object B is typically referred to as a "subclass" of Object A.



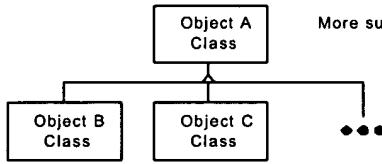
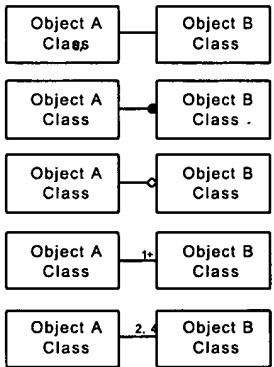
The Object A Class is responsible for creating instances of Object A. The Object A Class is often referred to as the "class factory" for Object A.



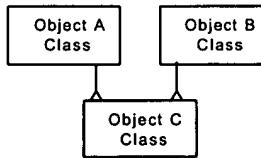
Aggregation - Assembly Class is composed of two other classes: Part-1 and Part-2. For each instance of Assembly Class, there is one, and only one, instance of a Part-2 Class, and zero or more instances of a Part-1 Class.



The Object A Class has an association Association Name with the Object B Class.



More subclasses exist.



Multiple Inheritance - Object C Class inherits the data and methods from both the Object A Class and the Object B Class i.e. Class C objects are subclasses of both Object A and Object B objects..

Figure 6 - Object Model Notation Conventions

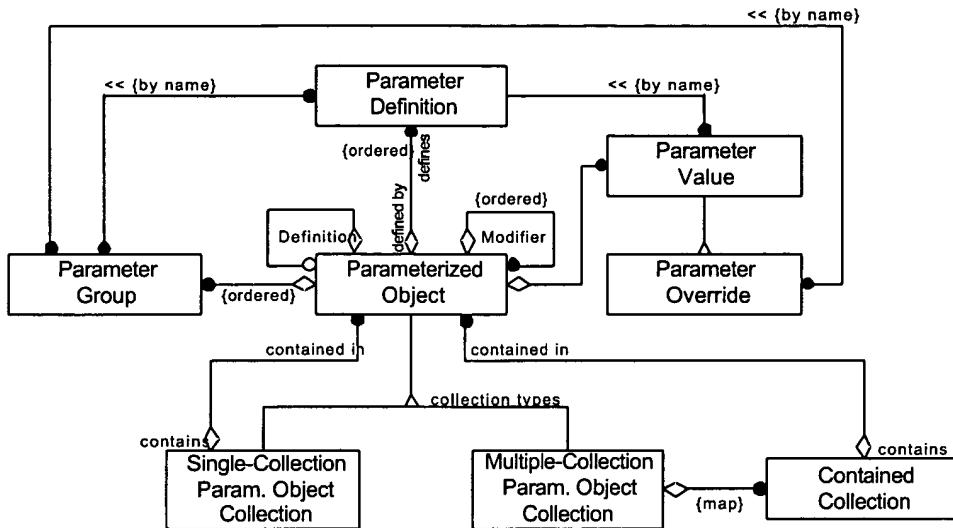


Figure 7 - Parameterized Object Model

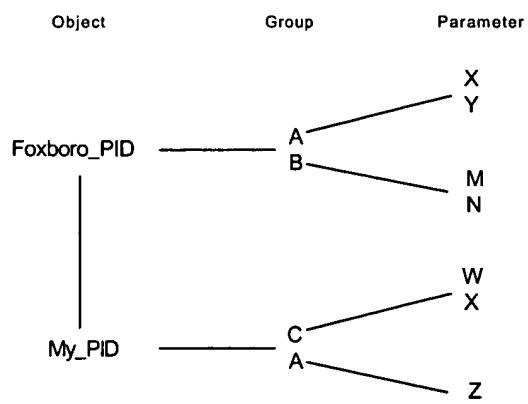


Figure 8 - Parameter Group Inheritance

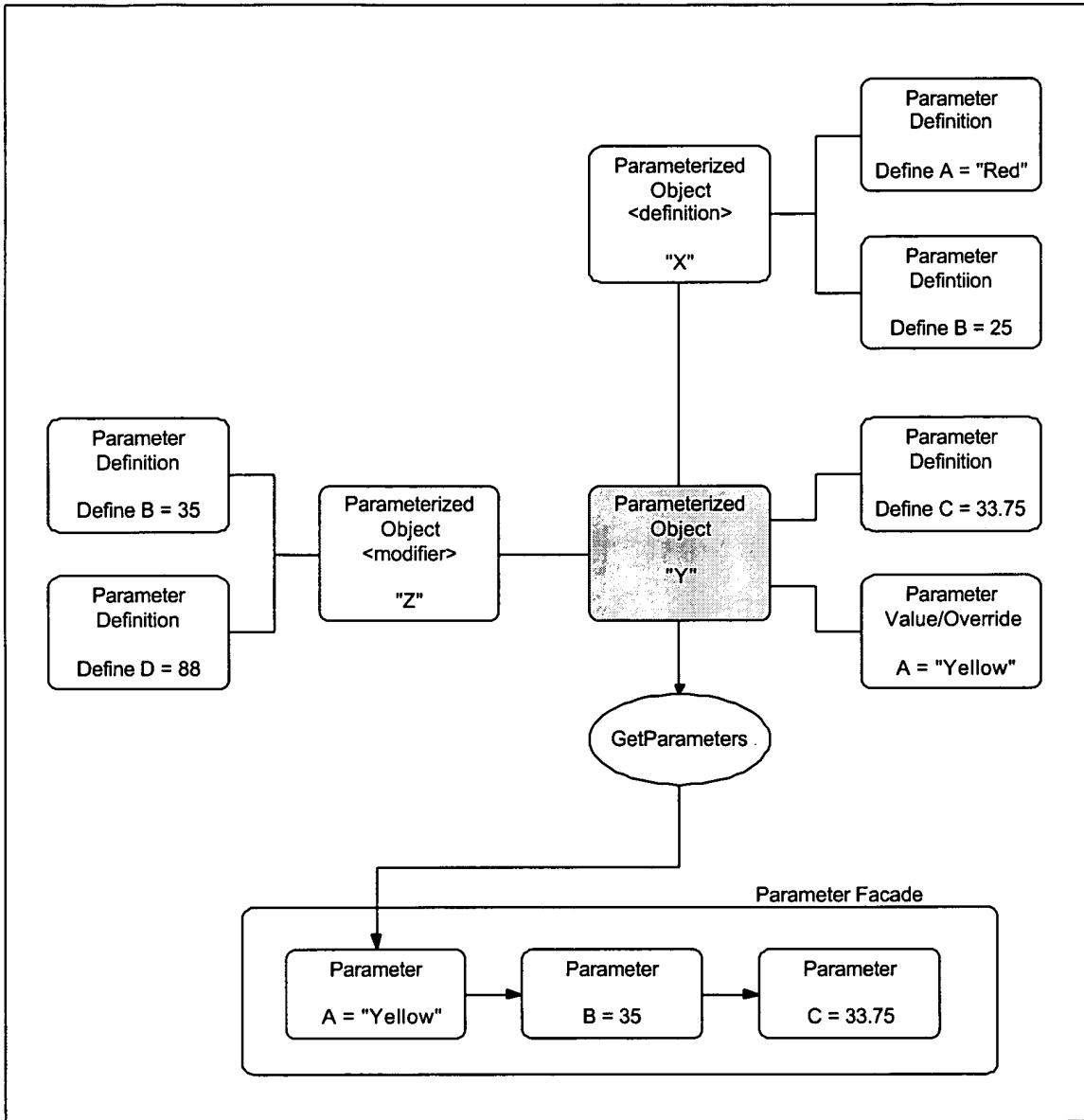


Figure 9 - Parameterized Object Example

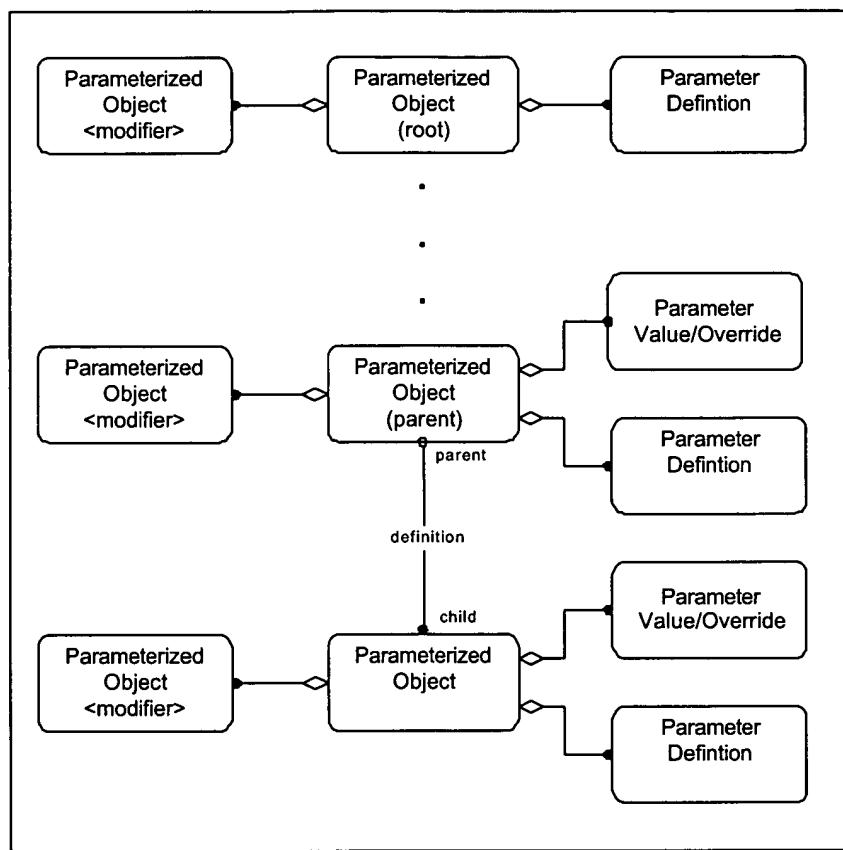


Figure 10 - Creating A Parameter List

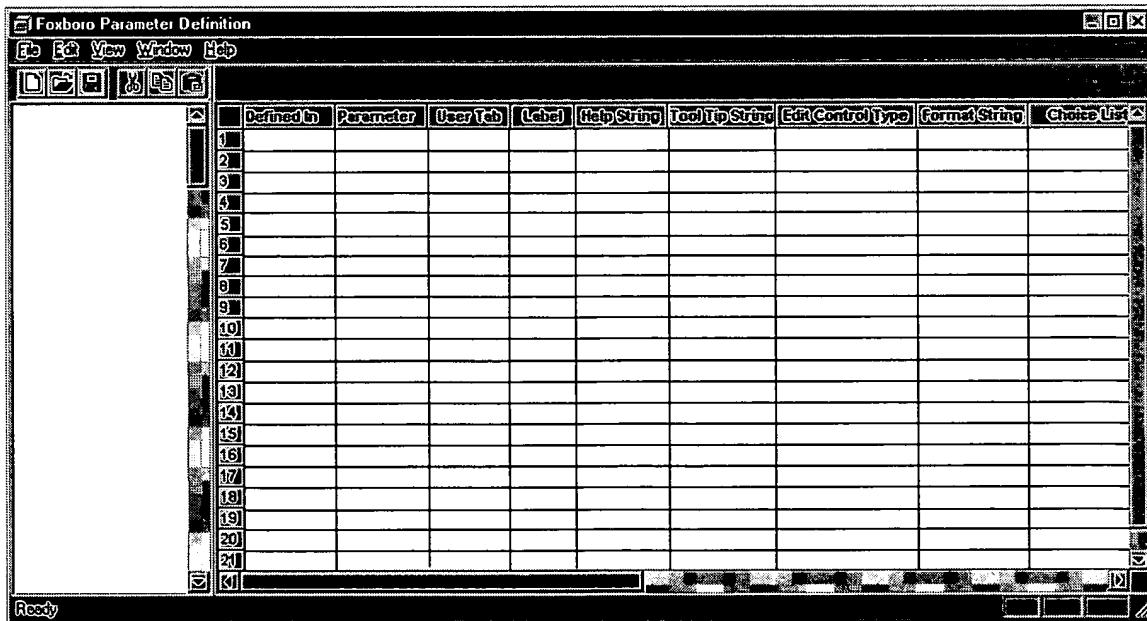


Figure 11 - Parameter Definition Editor

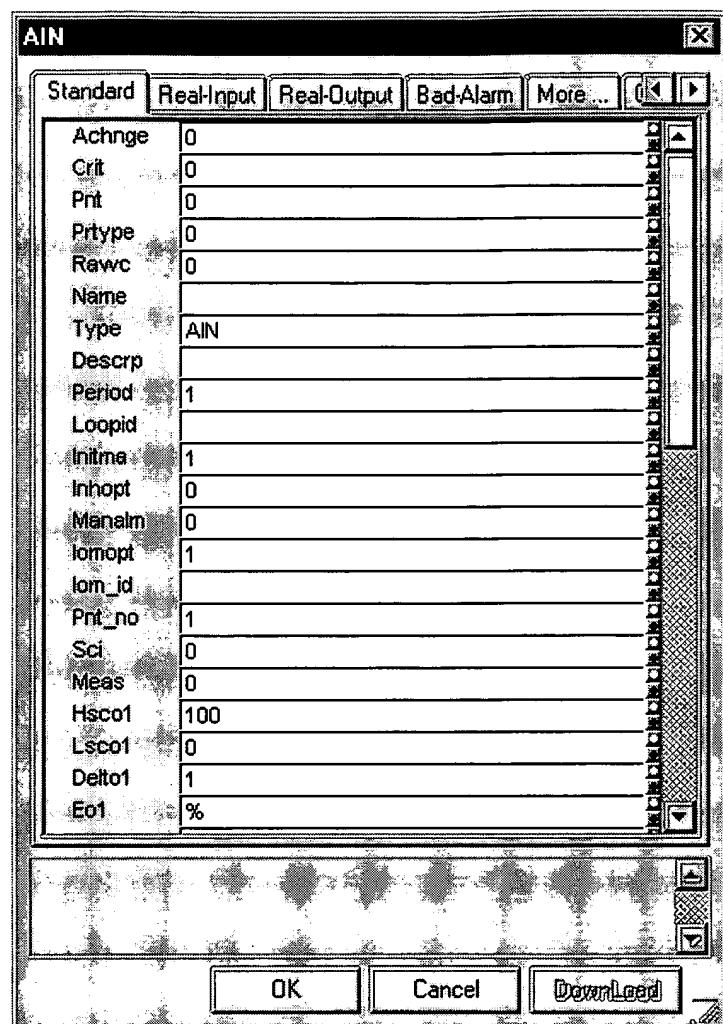


Figure 12 - Parameter Editor Example

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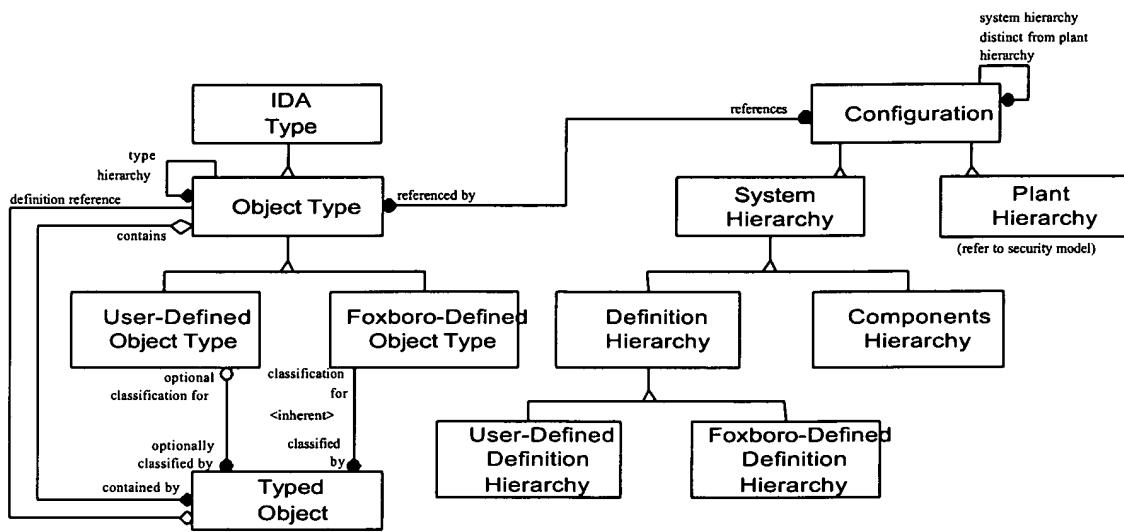


Figure 13 - Object Types

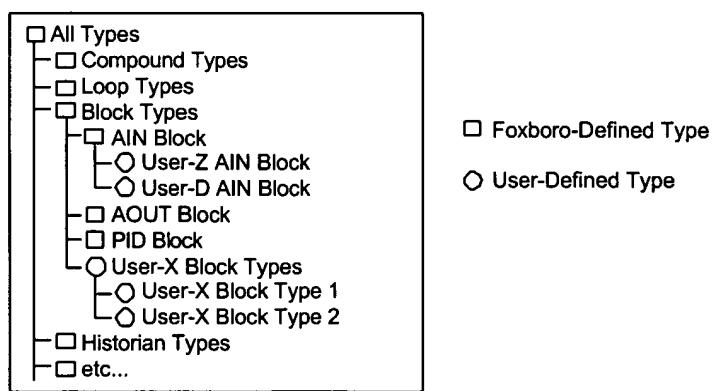


Figure 14 - Object Type Hierarchy Example

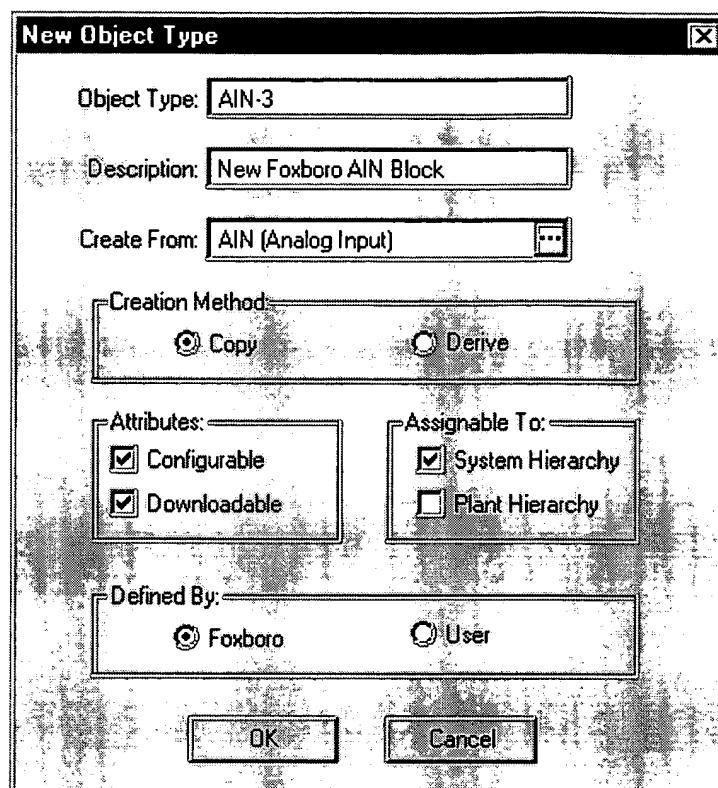


Figure 15 - Creating New Object Types

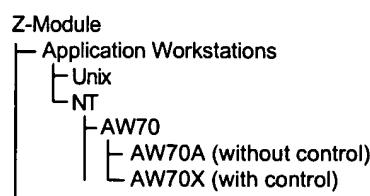


Figure 16 - Type Awareness Example

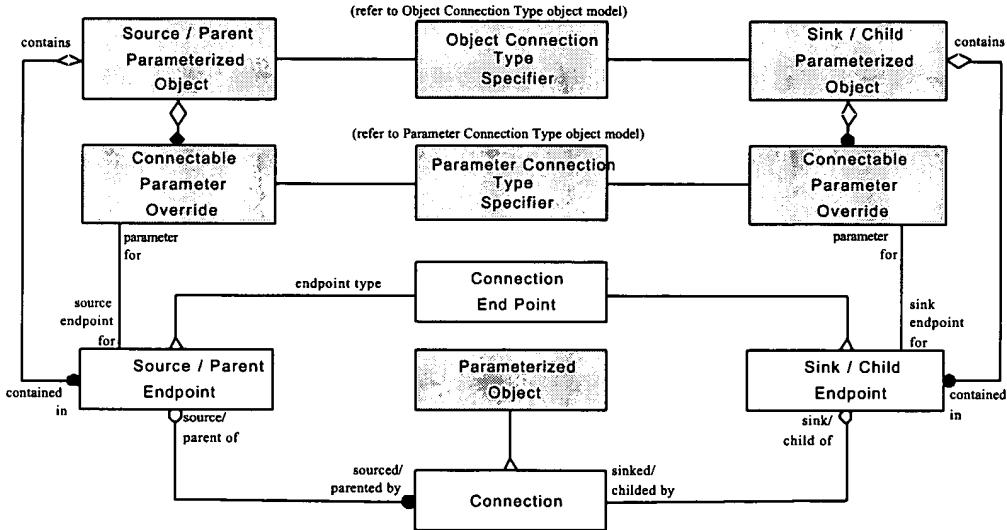


Figure 17 - Connection Object Model

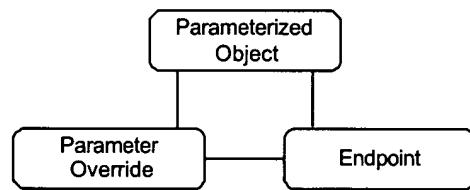


Figure 18 - Parameterized Object - Override - Endpoint Triad

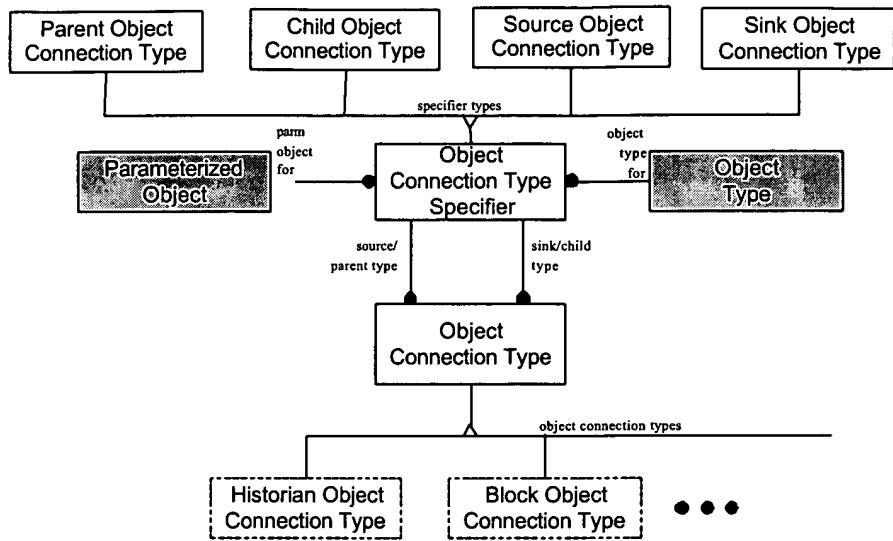


Figure 19 - Object Connection Type Object Model

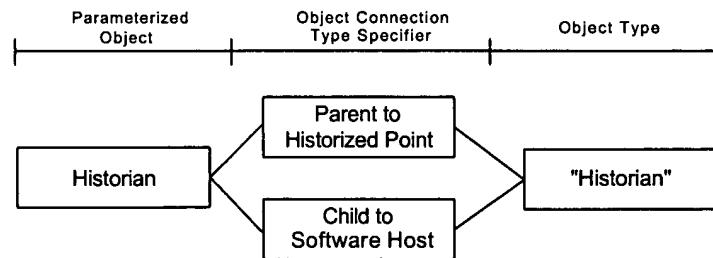


Figure 20 - Example of Simultaneous Parent/Child Object Connectivity

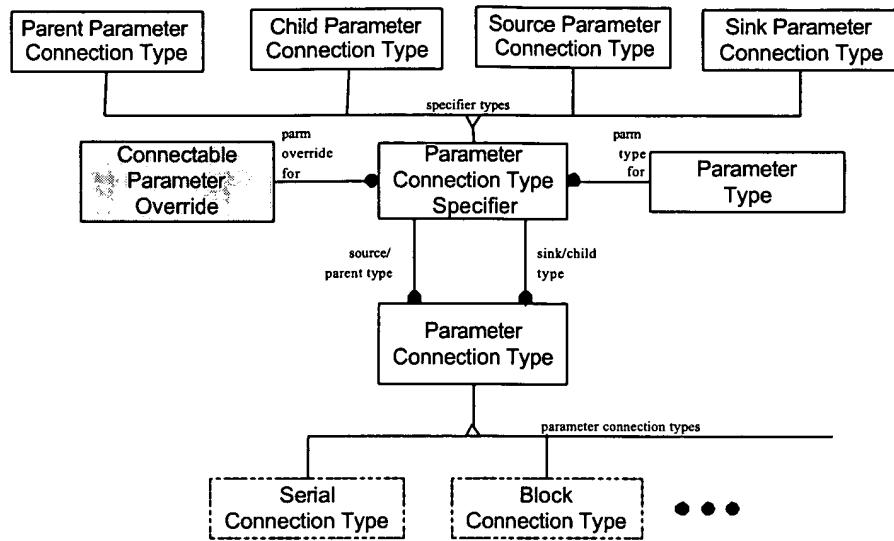


Figure 21 - Parameter Connection Type Object Model

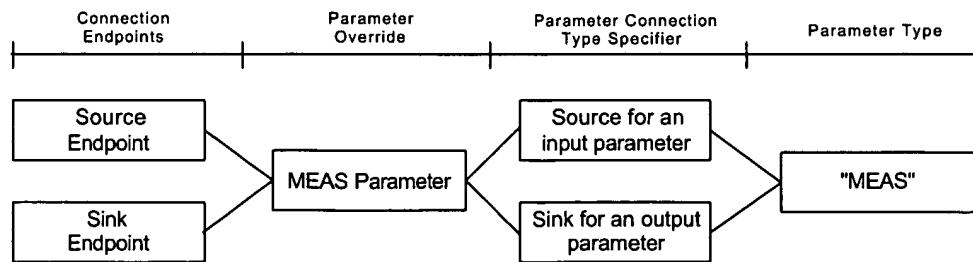


Figure 22 - Example of Simultaneous Source/Sink Parameter Connectivity

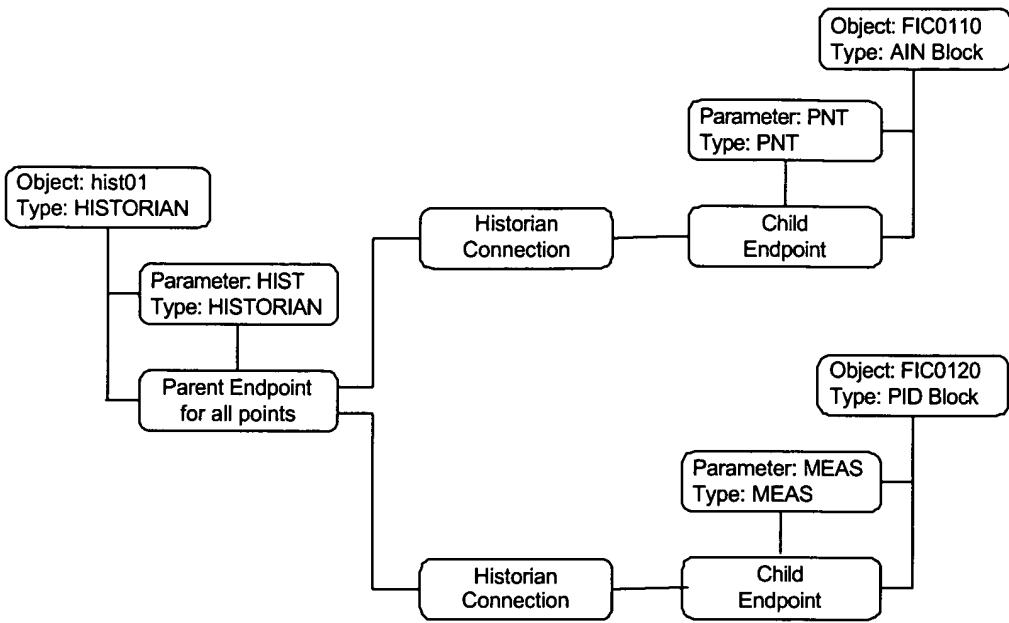


Figure 23 - Parent/Child Connectivity Example - Case #1

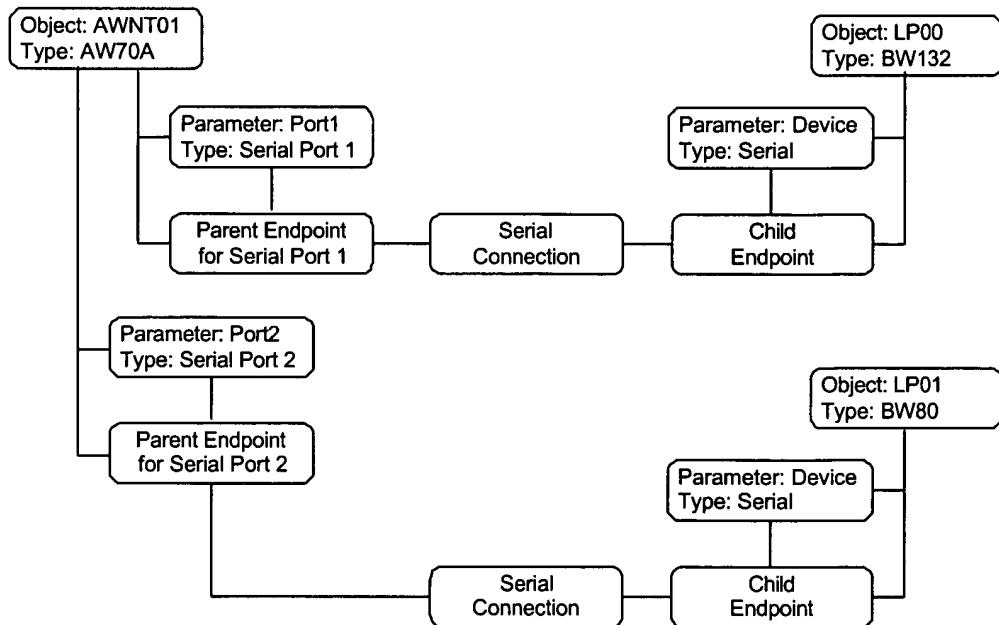


Figure 24 - Parent/Child Connectivity Example - Case #2

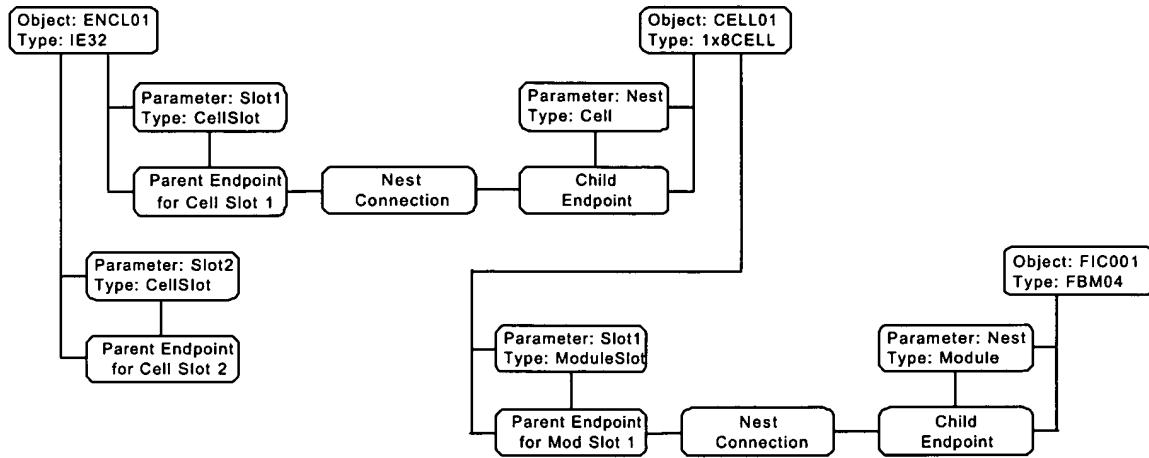


Figure 25 - Parent/Child Connectivity Example (Nest) - Case #3

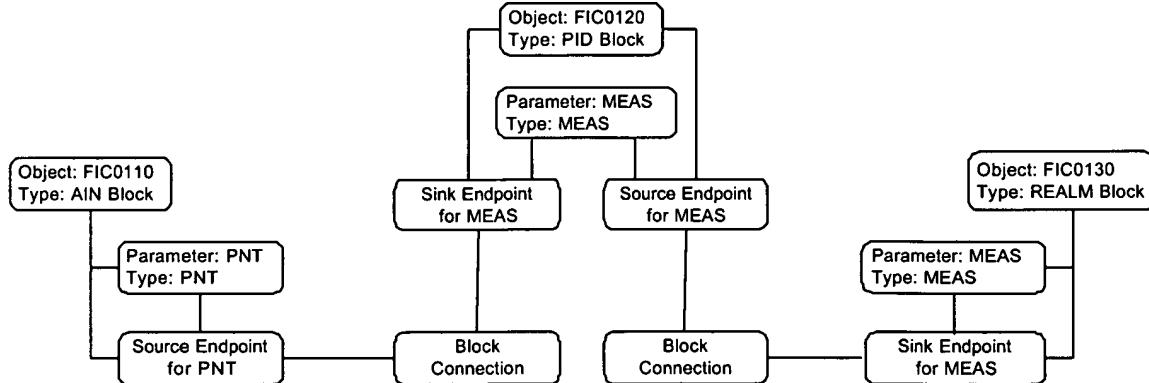


Figure 26 - Source/Sink Connectivity Example

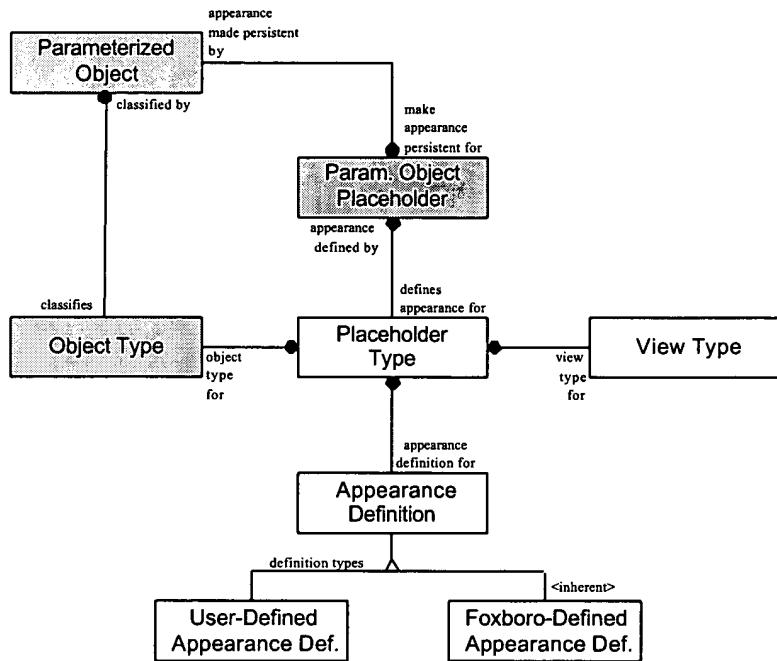


Figure 27 - Appearance Object Model

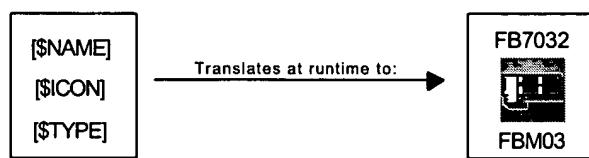


Figure 28 - Appearance Definition Example

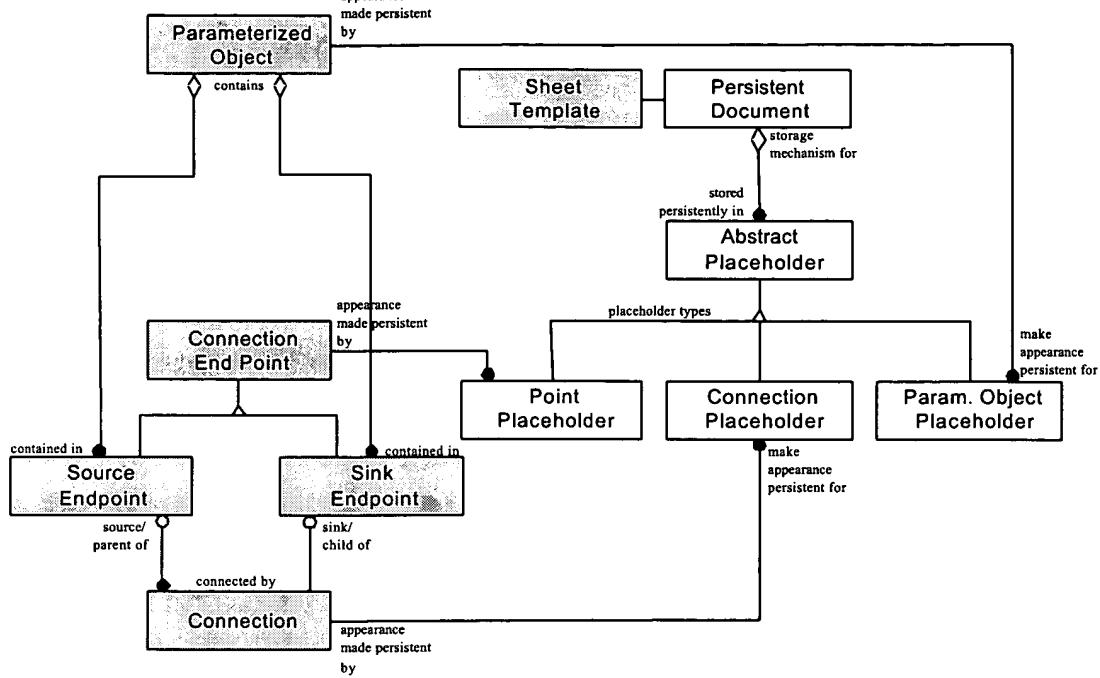


Figure 29A - Placeholders Object Model

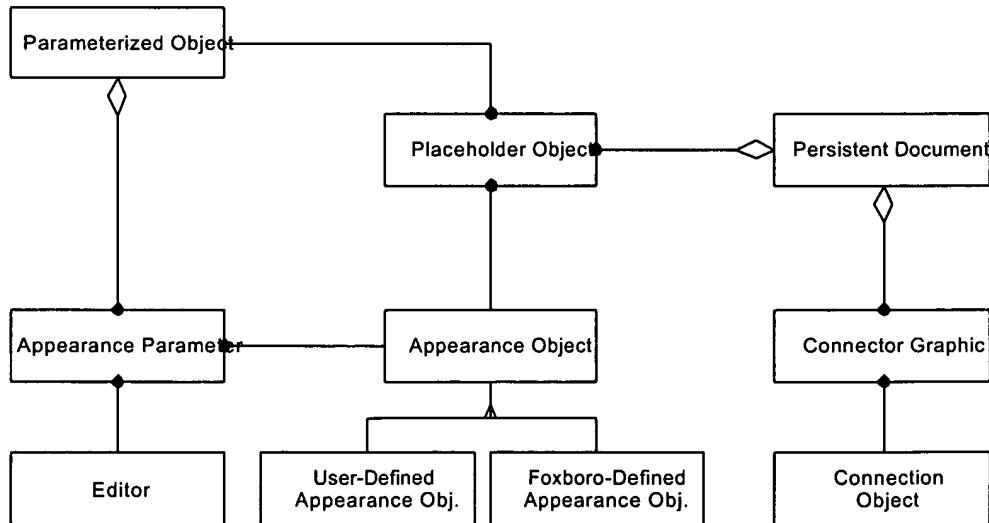


Figure 29B - Combined Placeholder/Appearance Object Model

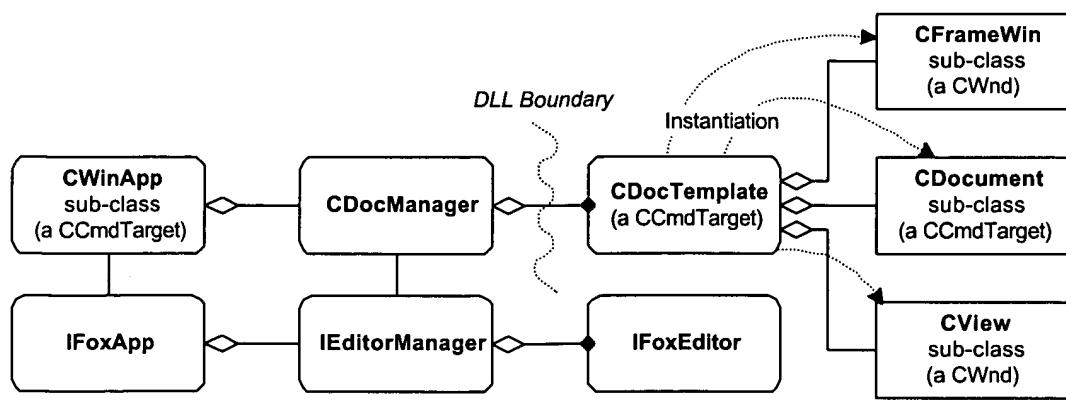


Figure 30 - MFC Document/View Architecture

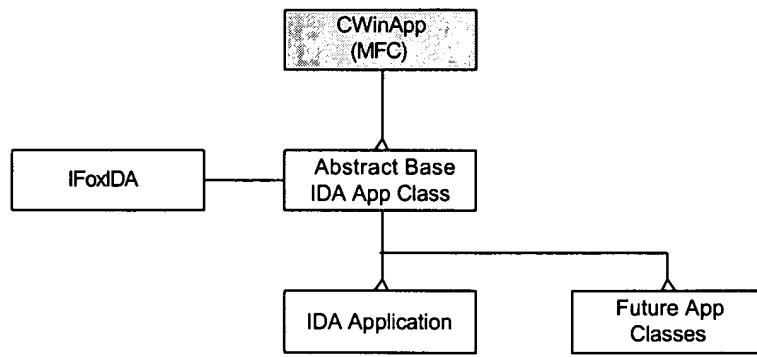


Figure 31 - The IDA Application Class Architecture

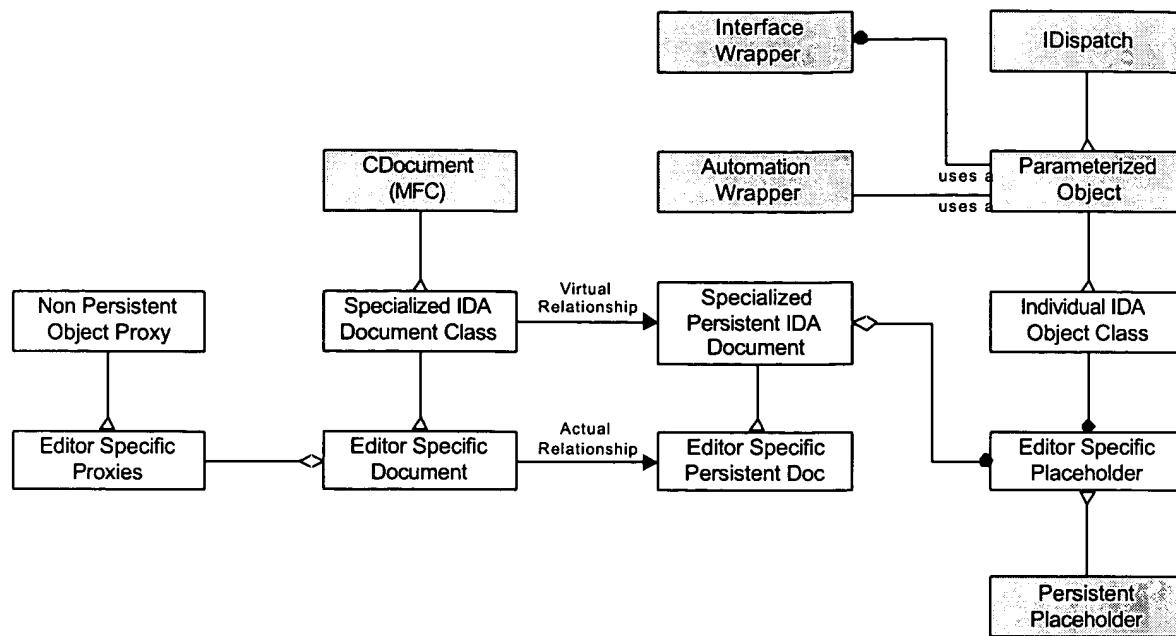


Figure 32 - The IDA Document Architecture

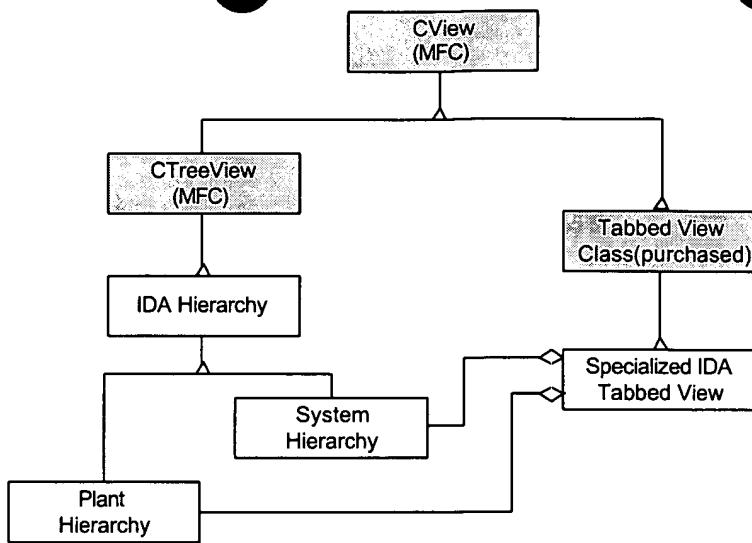


Figure 33 – IDA Hierarchy Classes

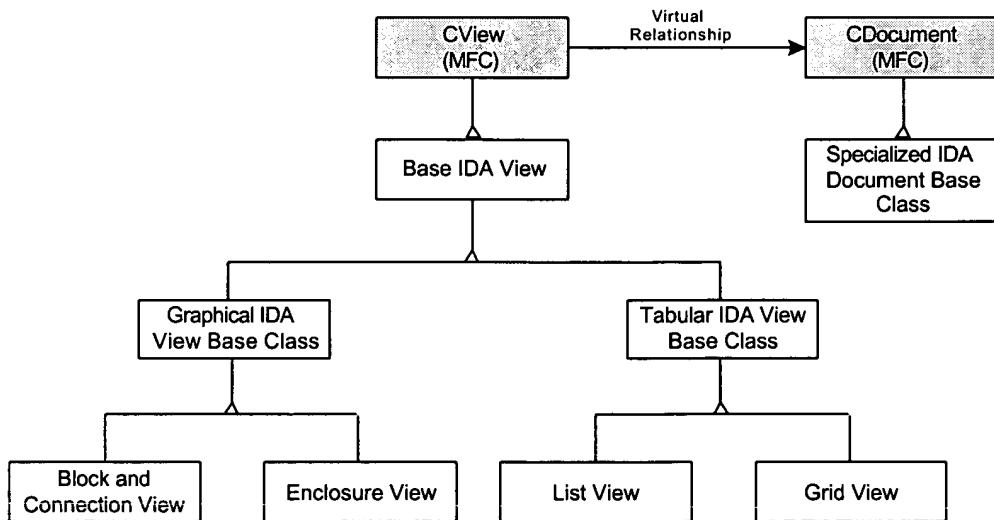


Figure 34 - The IDA View Classes

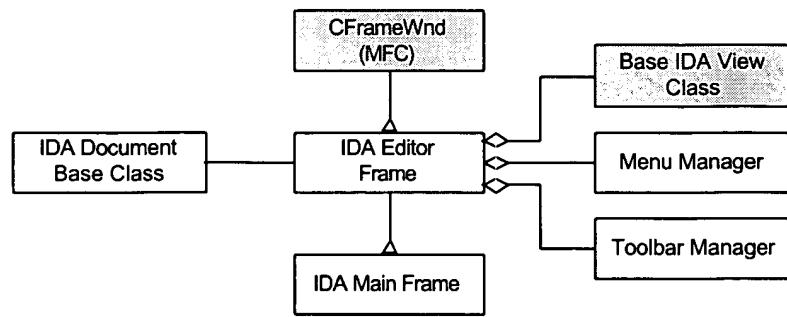


Figure 35 - The IDA Frame Classes

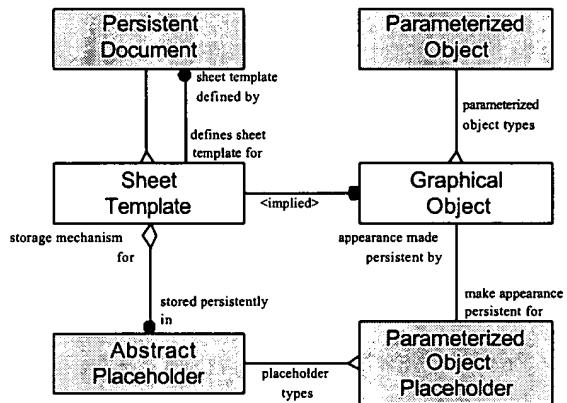


Figure 36 - Sheet Templates Object Model

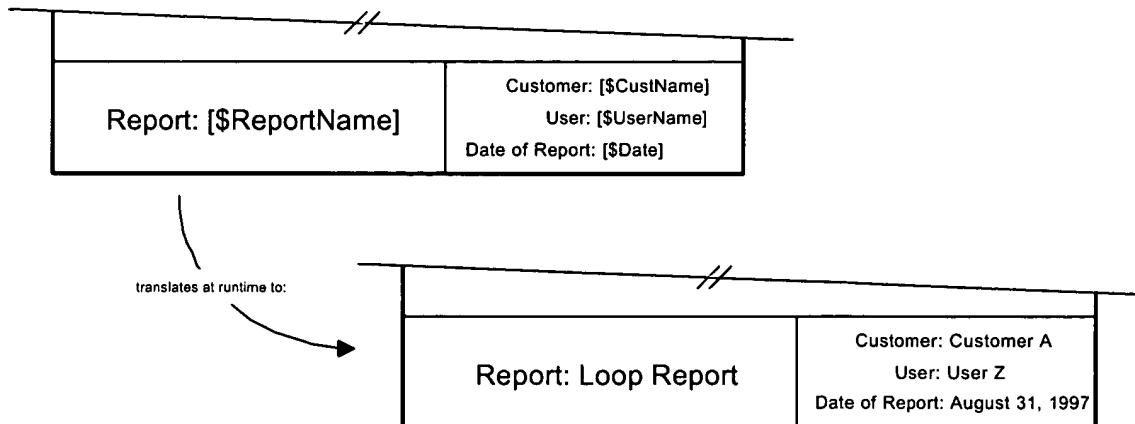


Figure 37 - Sample Use of Macros in Sheet Template

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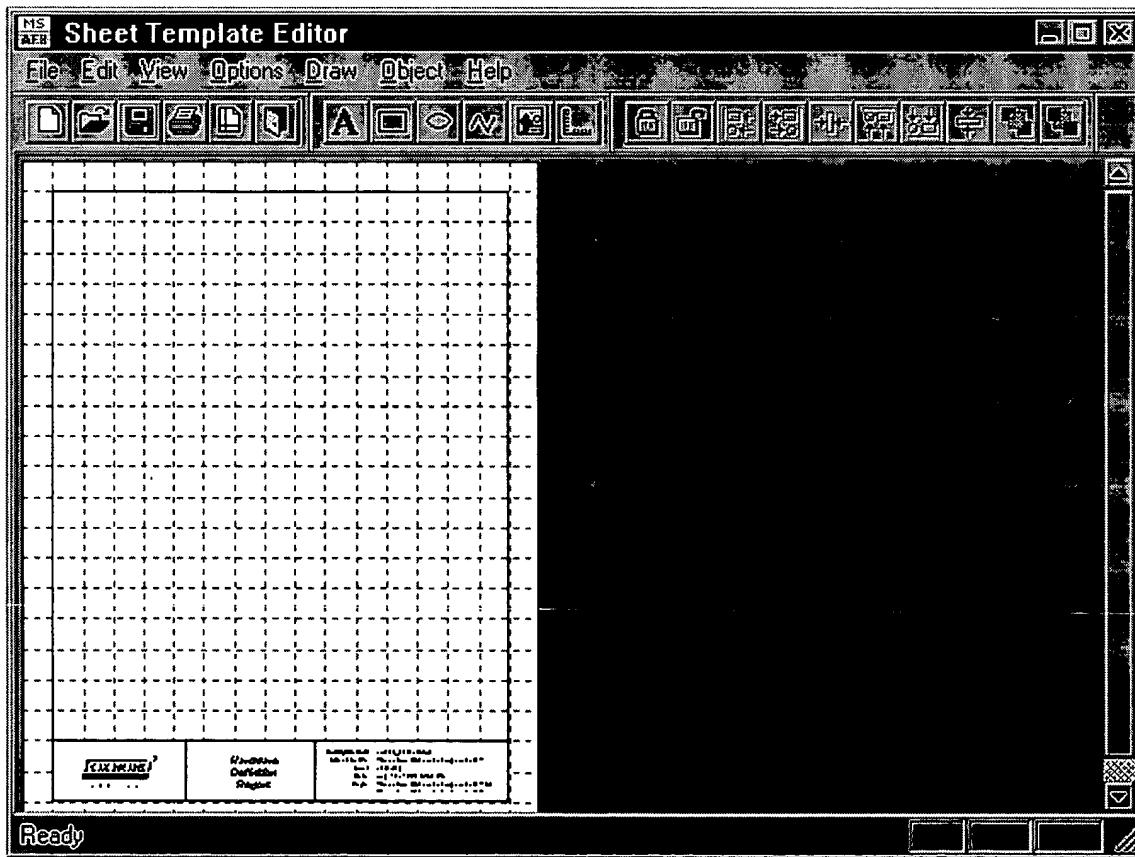


Figure 38 - Sheet Template Editor

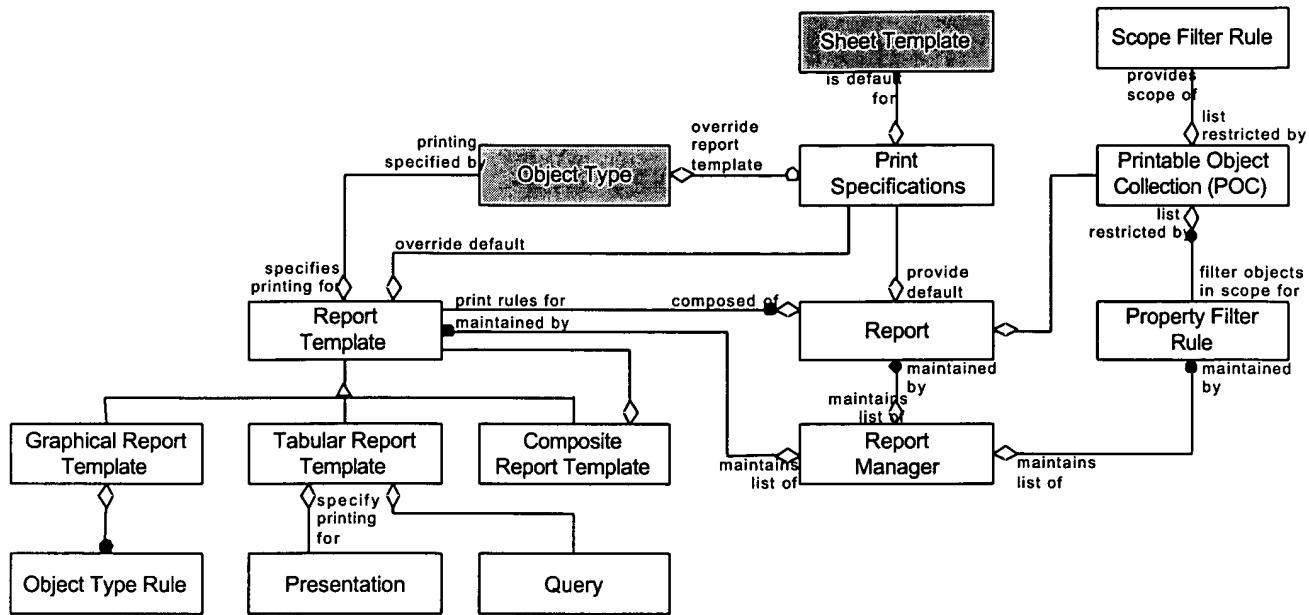


Figure 39 - The IDA Report Manager Object Model

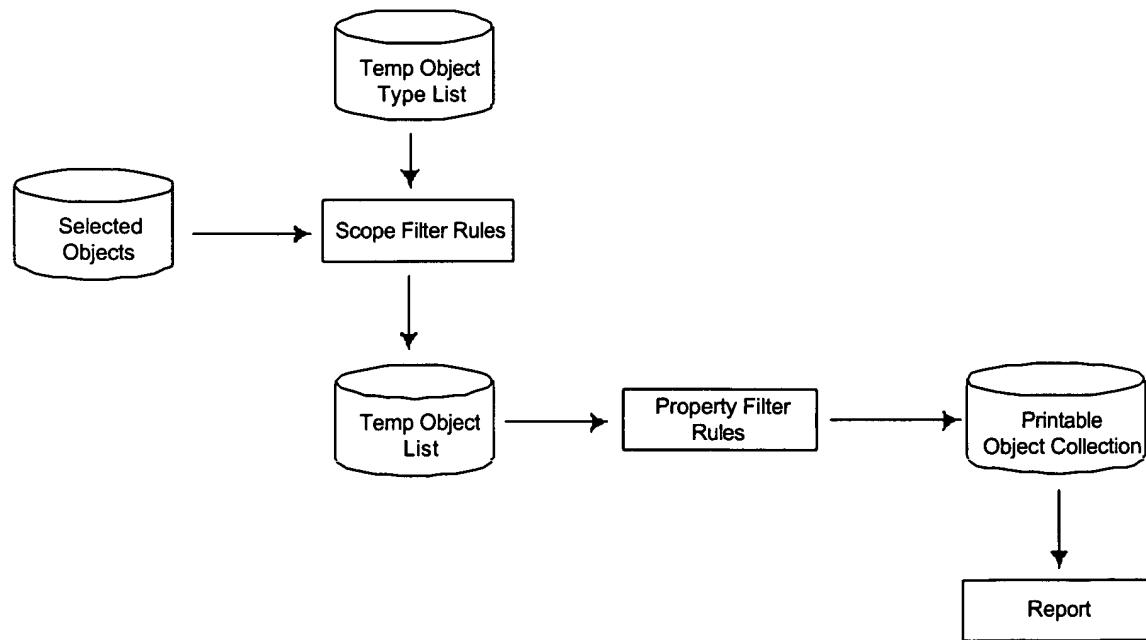


Figure 40 - Applying Filter Rules to POC

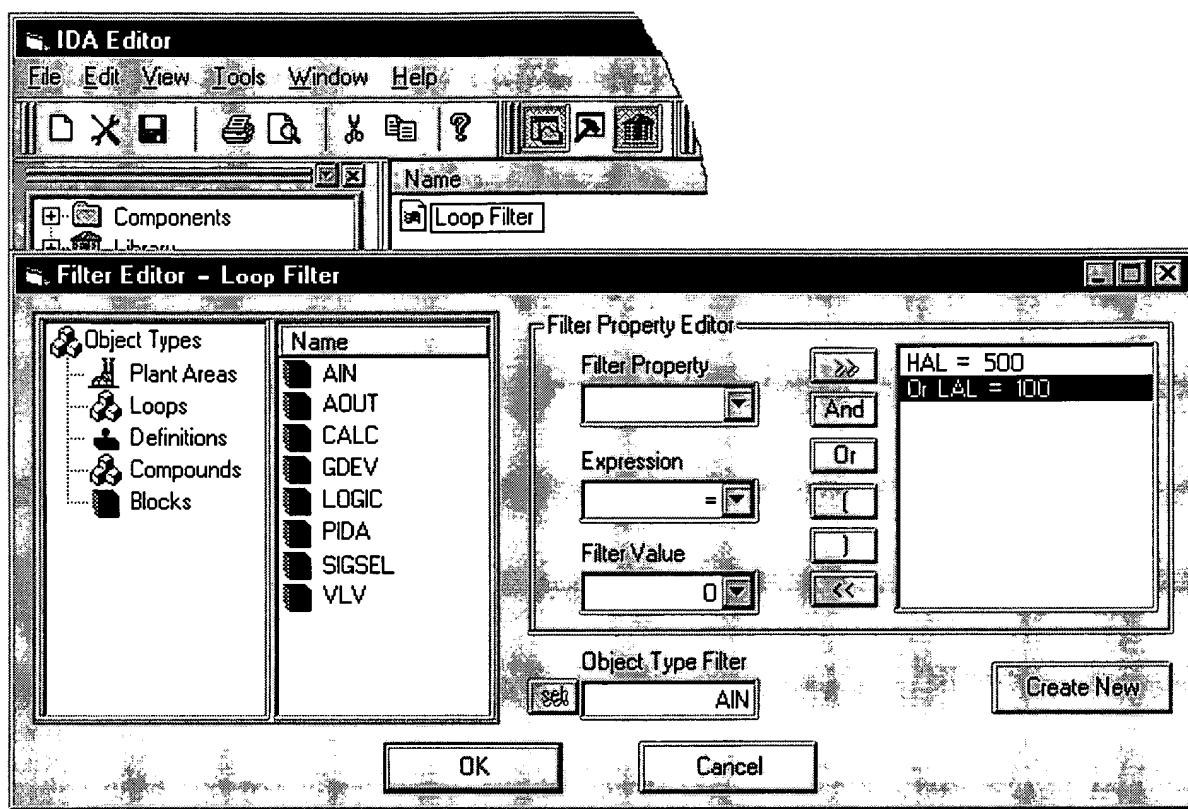


Figure 41 – Filter Editor

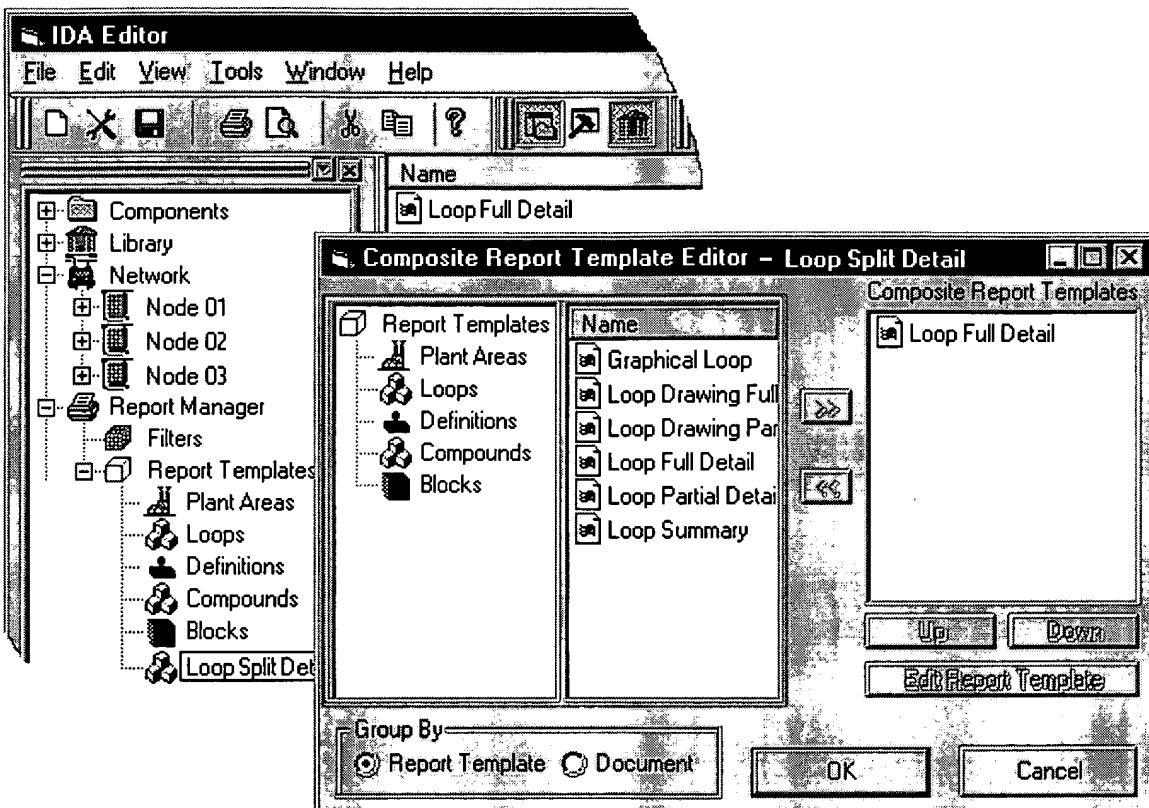


Figure 42 - Composite Report Template Editor

E K 0 4 4 2 0 0 7 7 9 U S

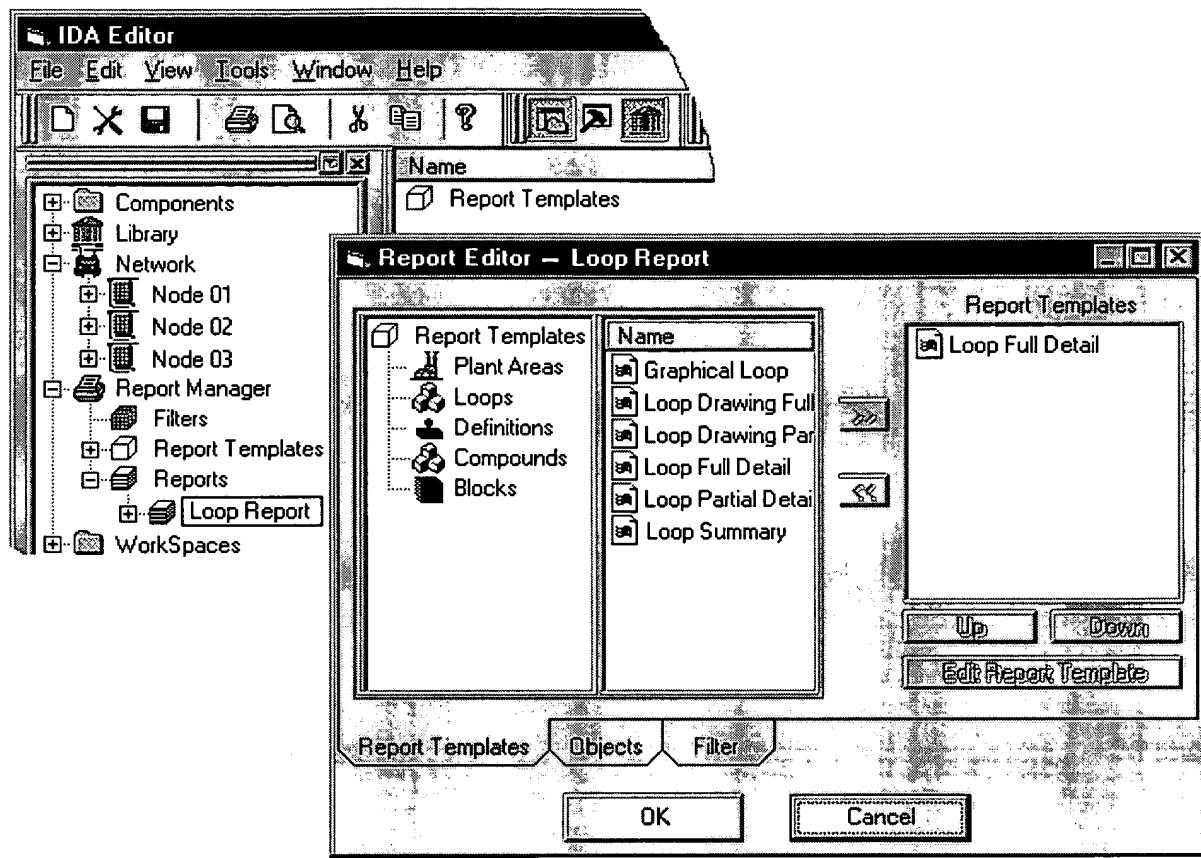


Figure 43 - Report Editor

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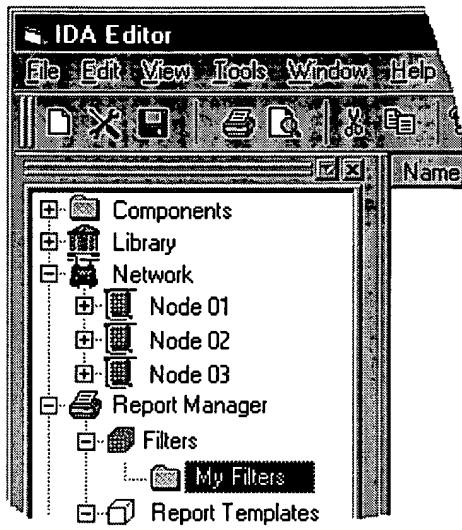


Figure 44 - Organizational Folders

EDITION 10.0
EDITION 10.0
EDITION 10.0

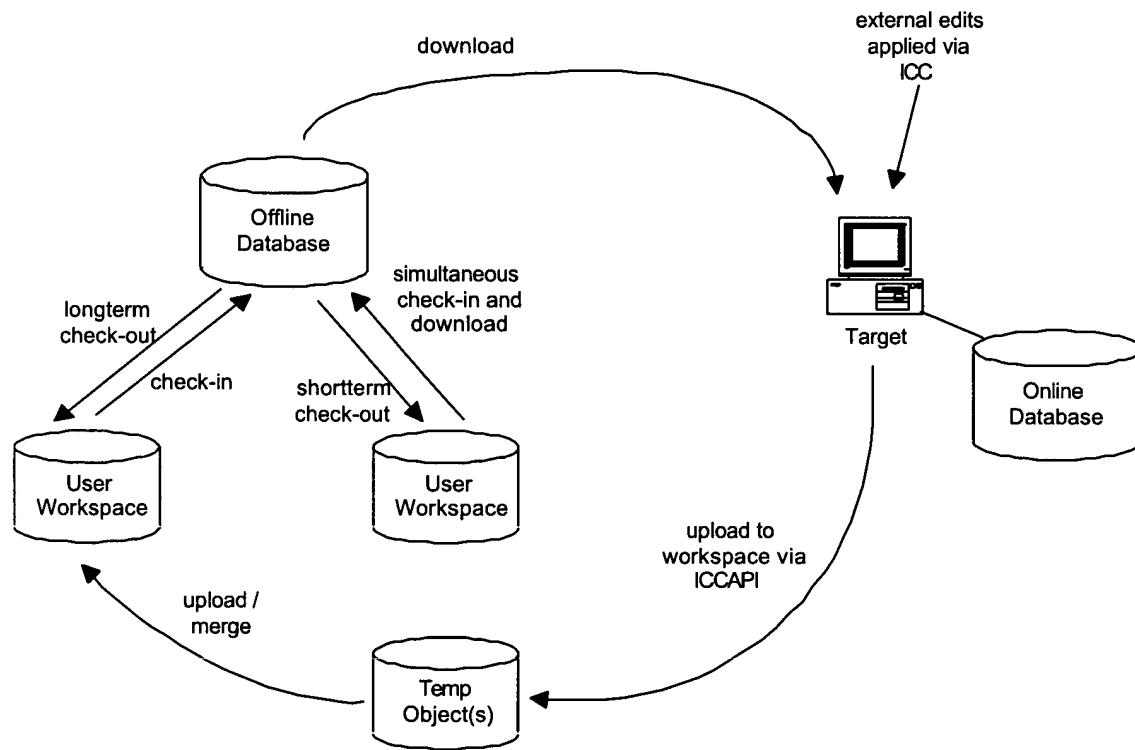


Figure 45 - Version Control - Basic Concepts

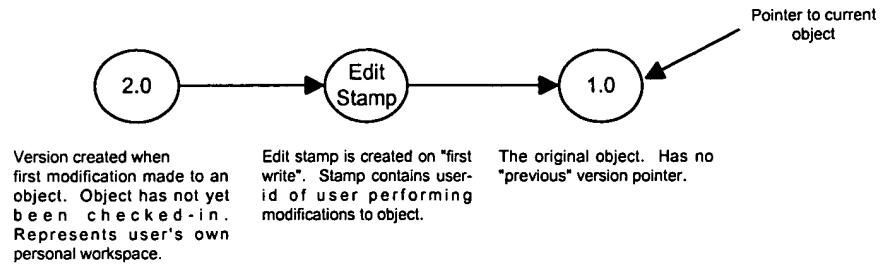


Figure 46 - Object Check-Out

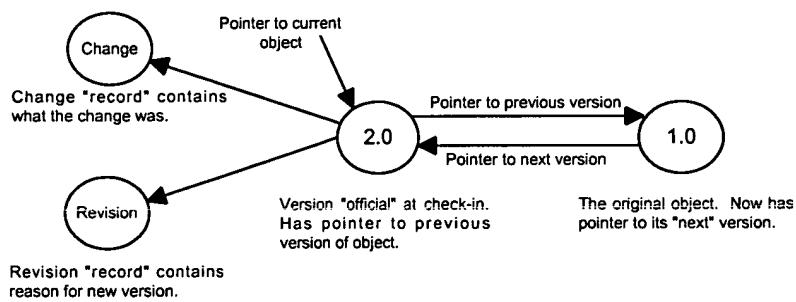


Figure 47 - Object Check-In

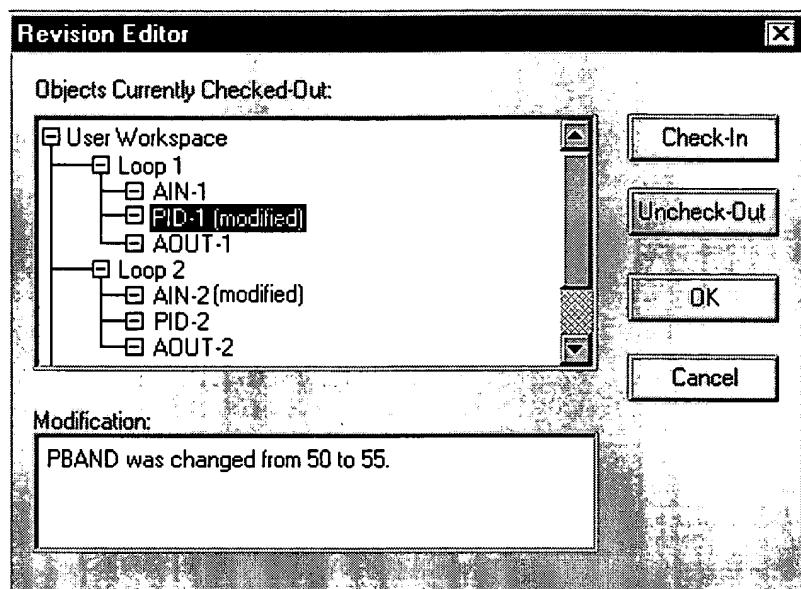


Figure 48 - Revision Editor

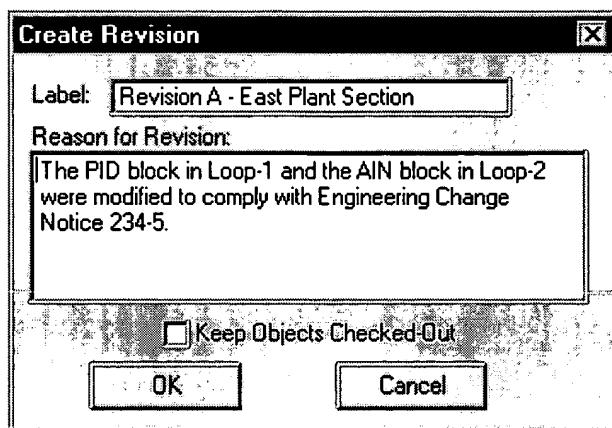


Figure 49 - Create Revision Dialog Box

E K 0 4 4 2 0 0 7 7 9 U S

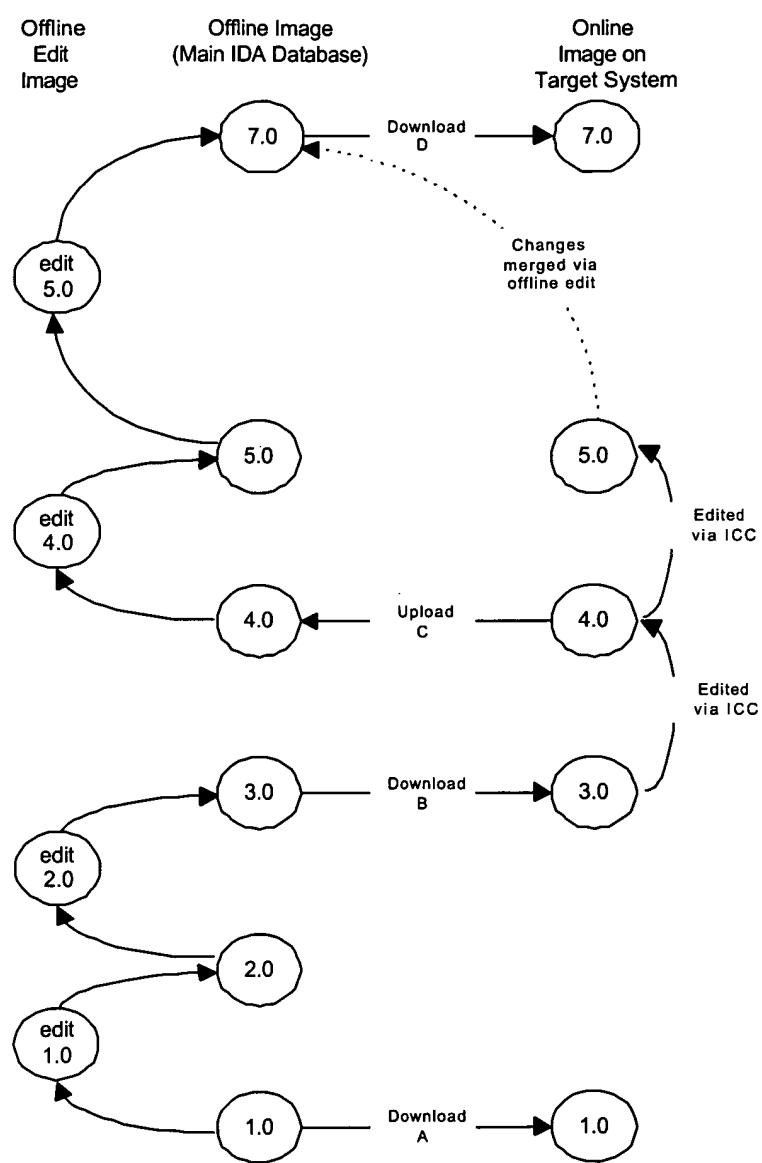


Figure 50 - Parameterized Object Versions

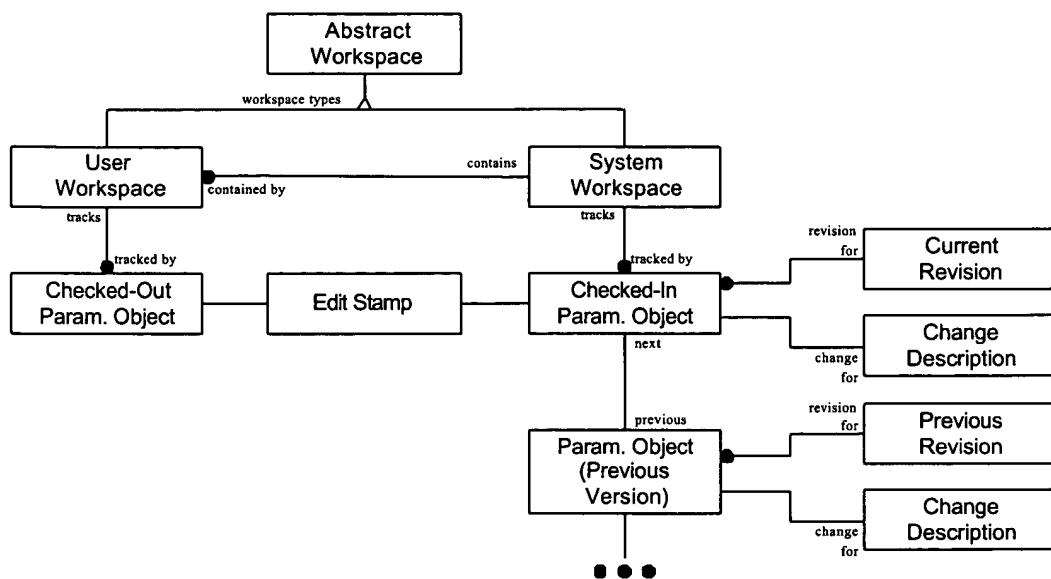


Figure 51 - Version Control Object Model

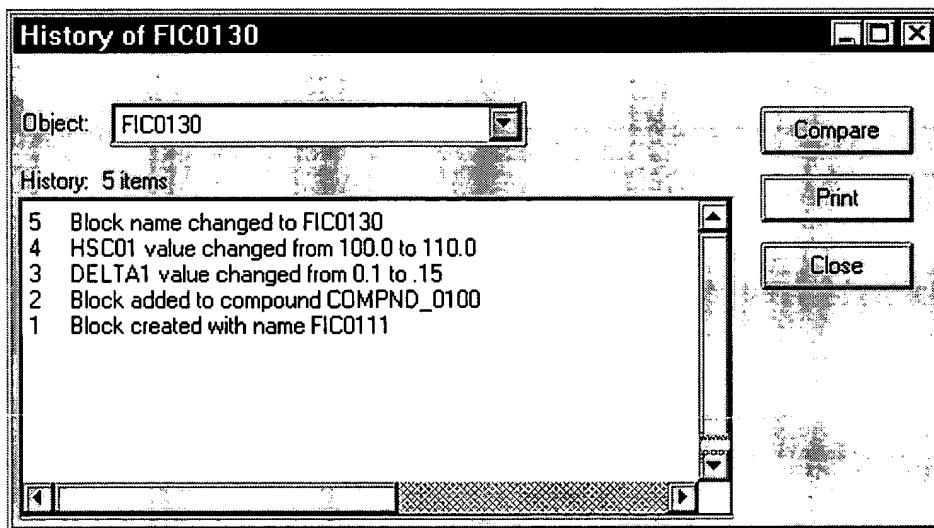


Figure 52 - Version History

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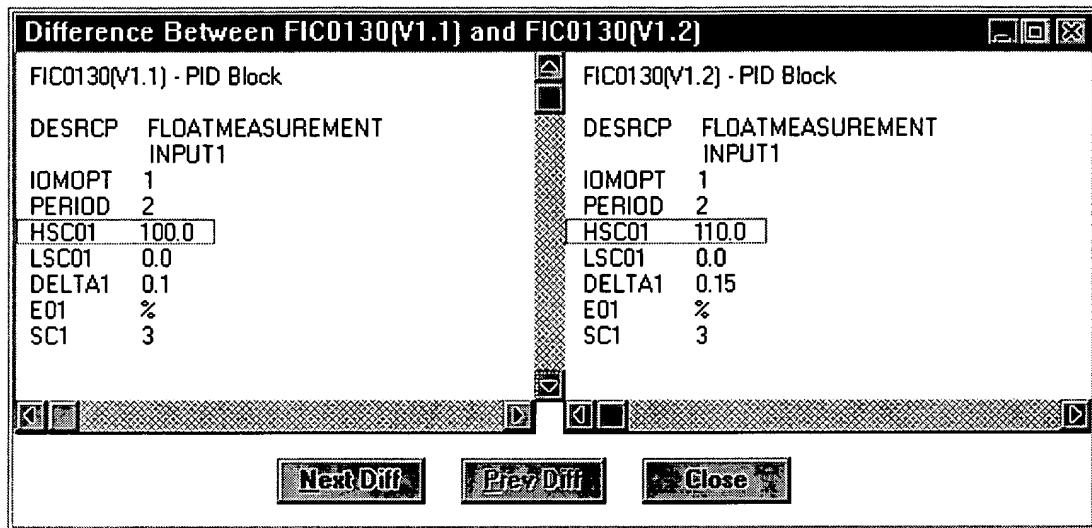


Figure 53 - Object Compare Utility

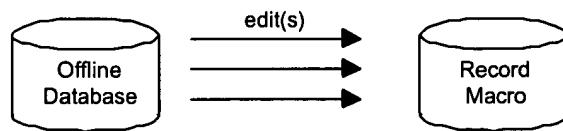


Figure 54 - Historical Archive with Playback Macro

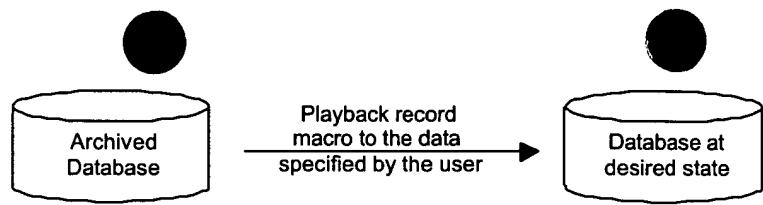


Figure 55 - Performing a Macro Playback

Object: PID2		Object Audit Trail: V1.0 to V1.2		
Version	Date	User	Modification	Reason for Modification
V1.0	09/27/97	MBJ	Object created.	
V1.1	09/29/97	MBJ	PBAND changed from 40 to 50.	FBM added to loop A.
V1.2	10/04/97	JKL	PBAND readjusted to 45.	Finetuning loop parameters.

Figure 56 - Sample Audit Trail Report

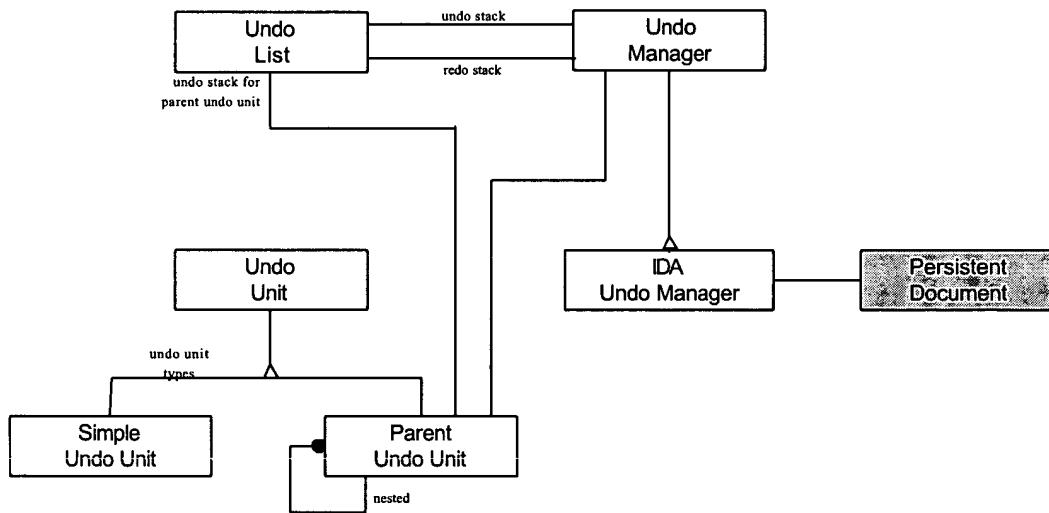


Figure 57 - Undo Manager Object Model

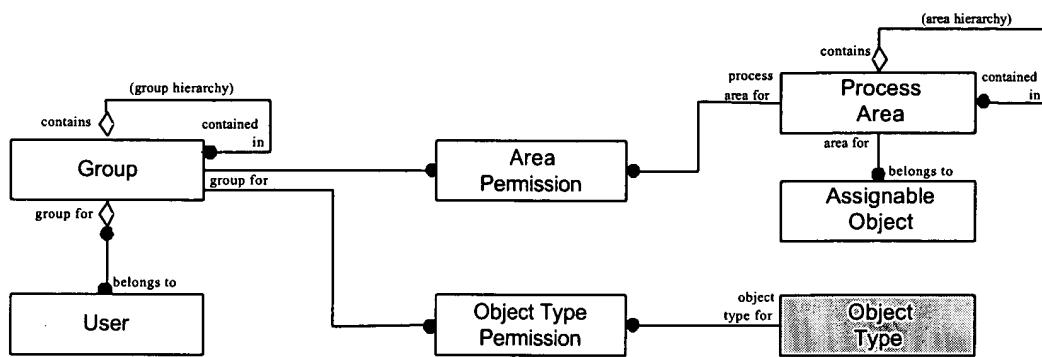


Figure 58 - Users and Security Object Model

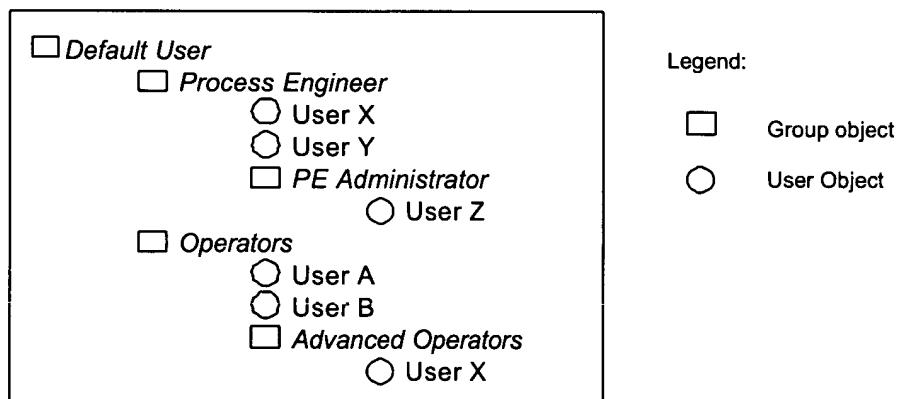


Figure 59 - Users and Groups Example

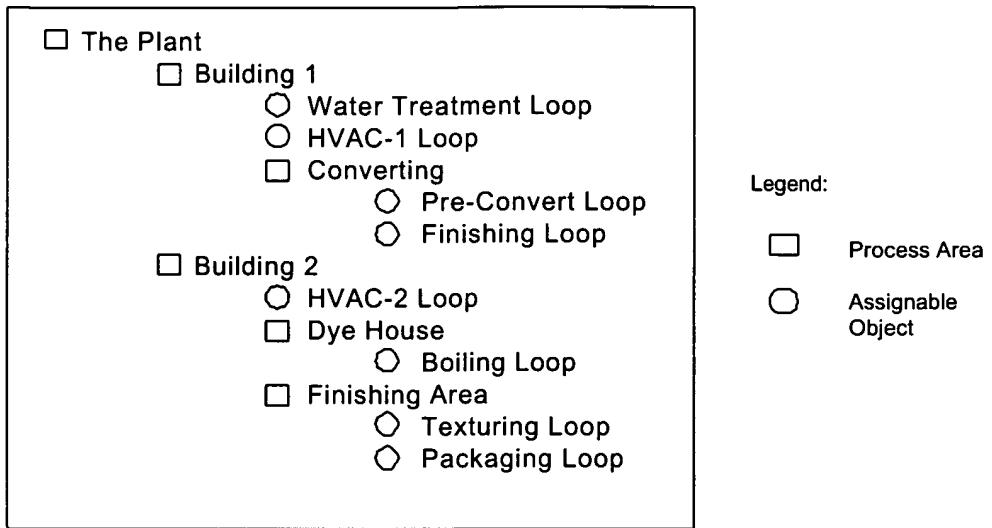


Figure 60 - Process Area and Assignable Objects Example

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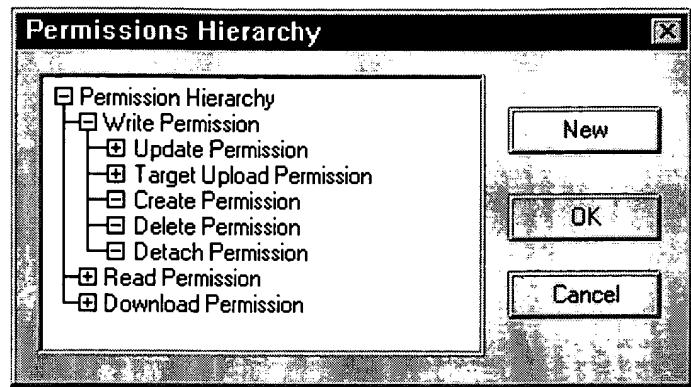


Figure 61 - IDA Permissions Hierarchy

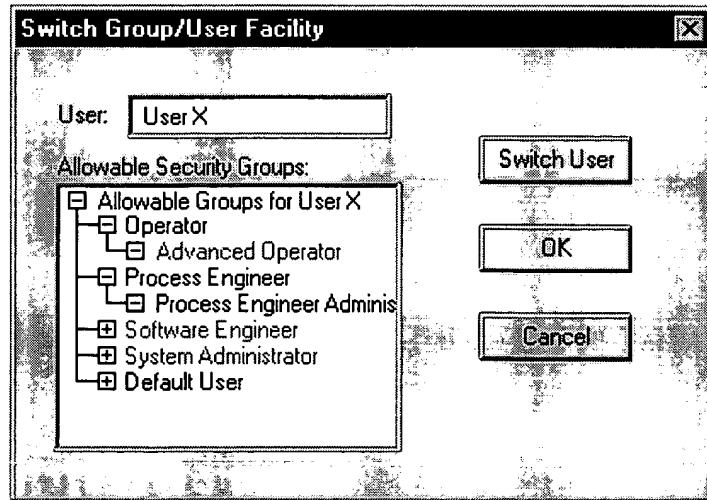


Figure 62 - Switch Group/User Capability

E K 0 4 4 2 0 0 7 7 9 U S

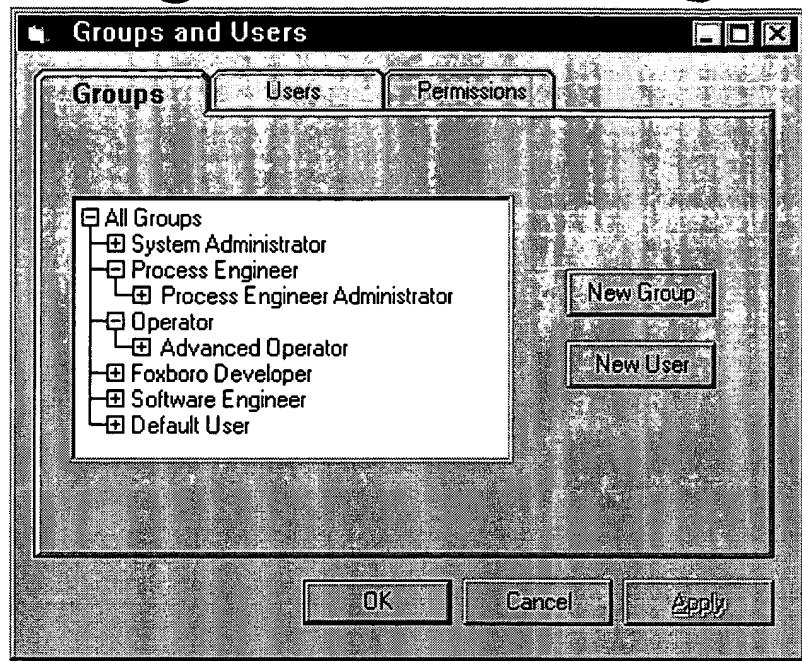


Figure 63 - Managing Groups

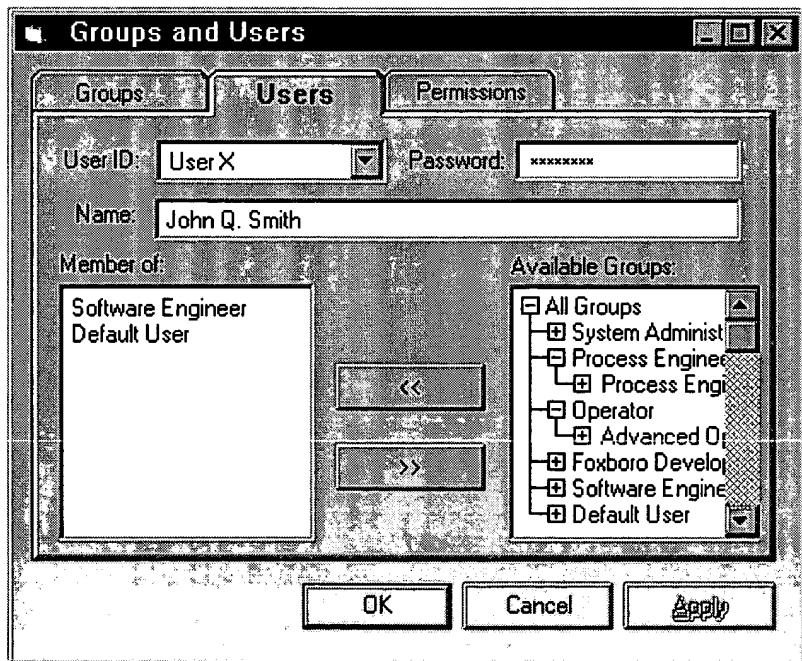


Figure 64 - Assigning Users to Groups

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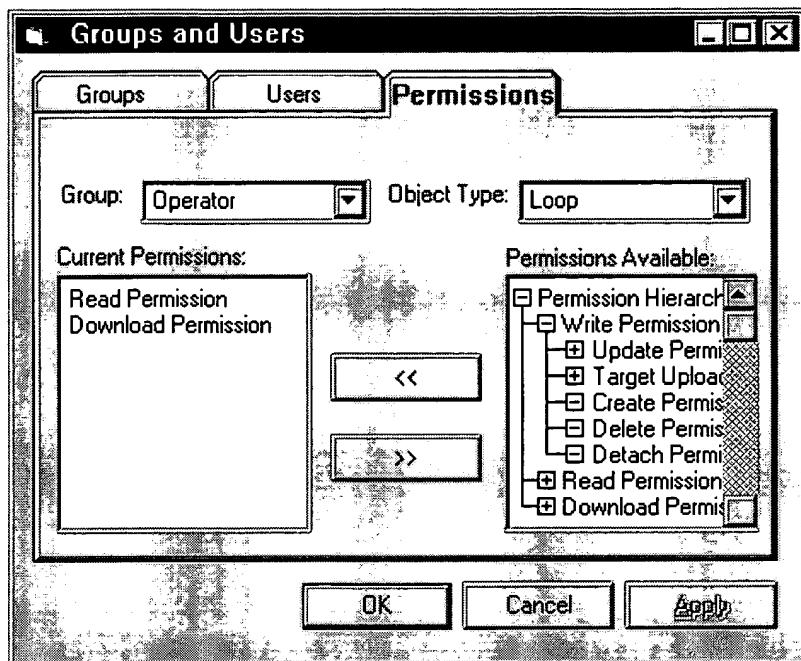


Figure 65 - Groups, Object Types and Permissions

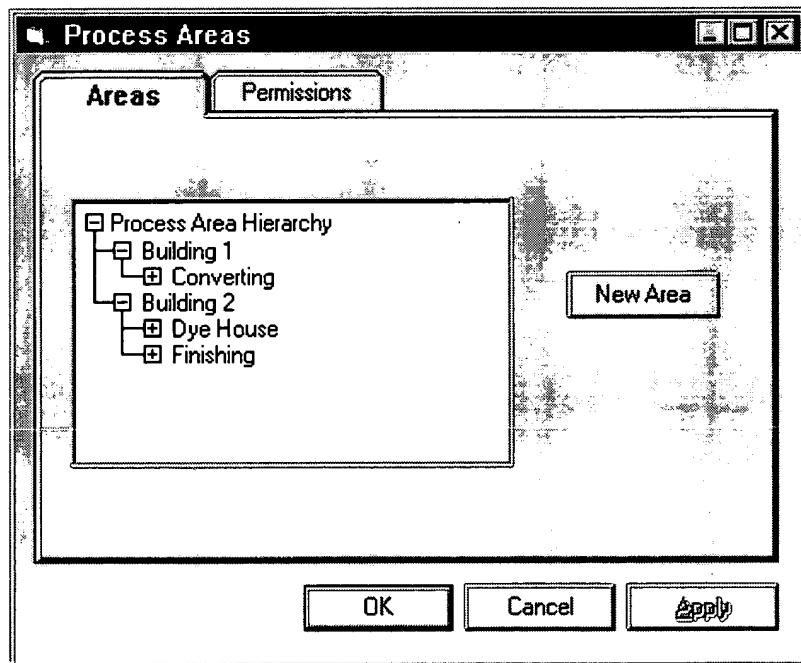


Figure 66 - Managing Process Areas

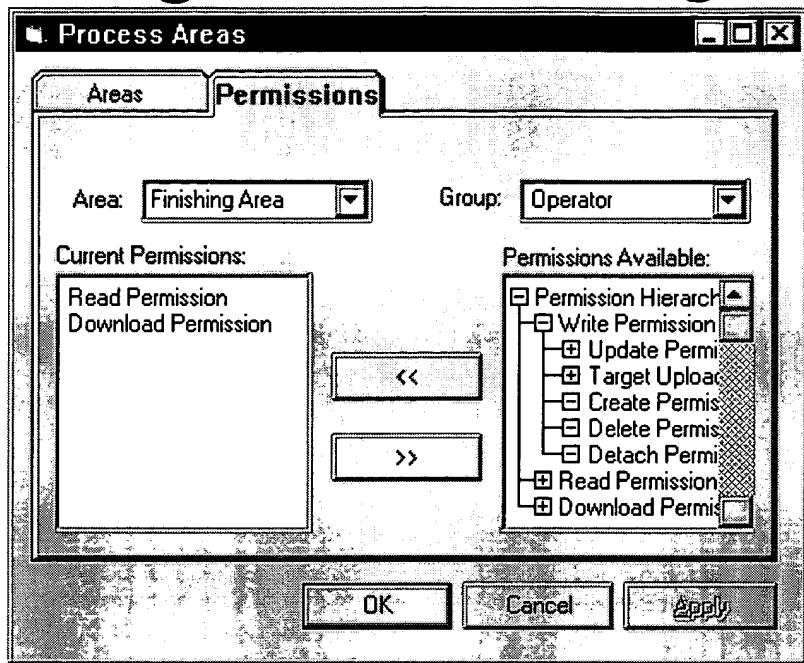


Figure 67 - Groups and Process Area Permissions

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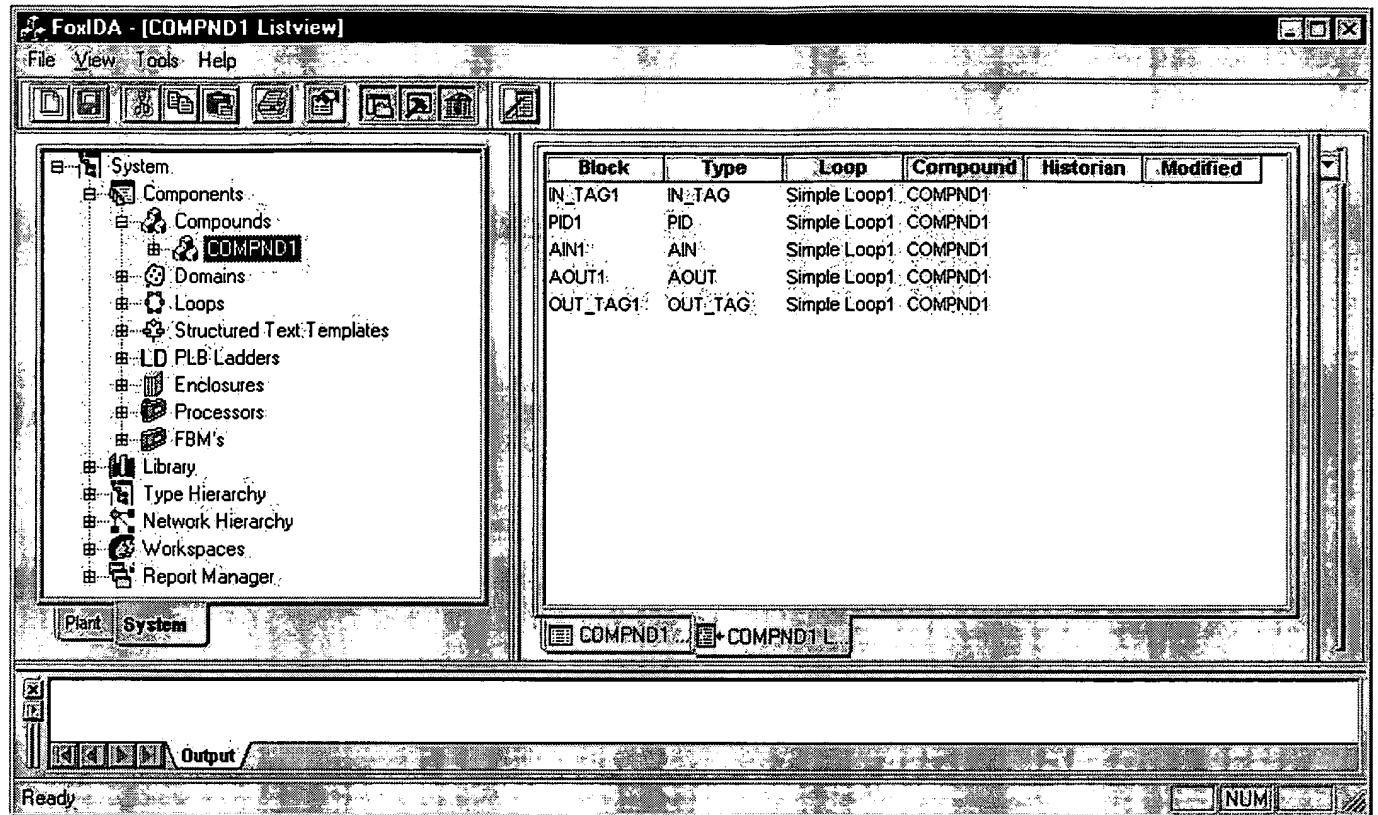


Figure 68 - System TreeView

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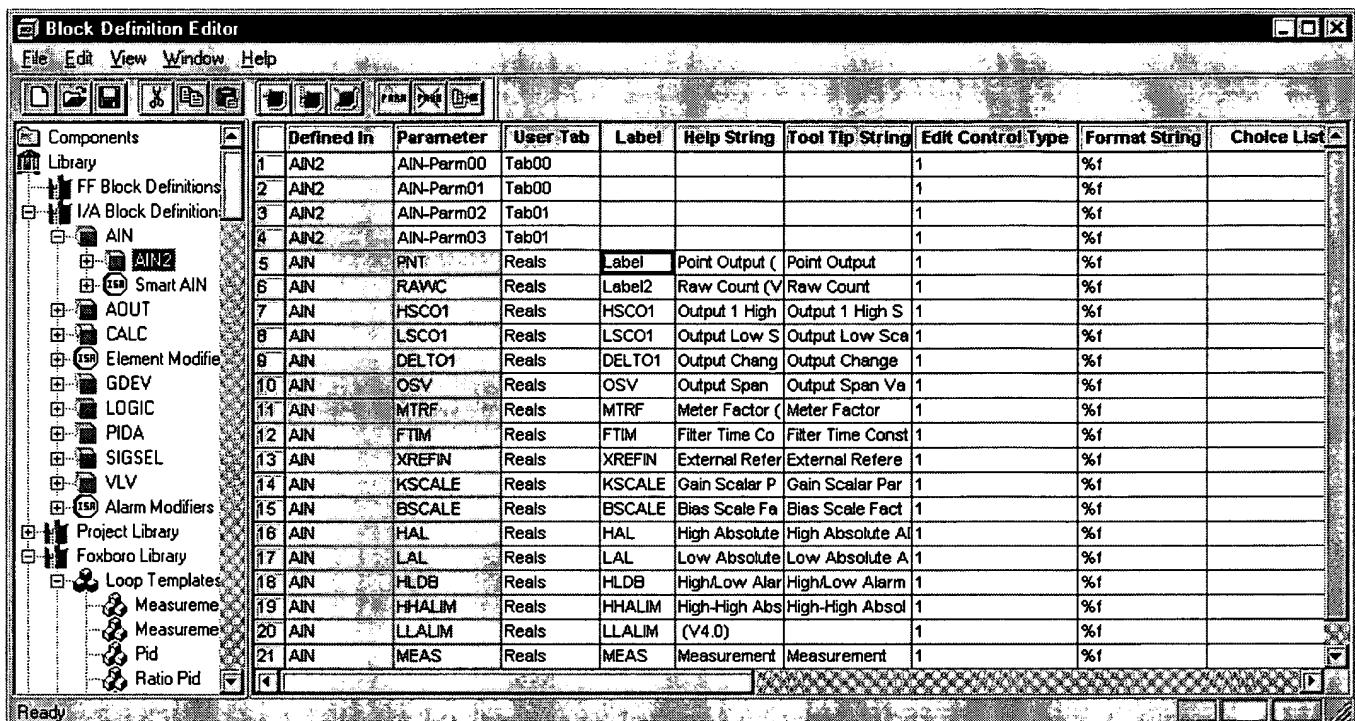


Figure 69 - Block Definition Editor

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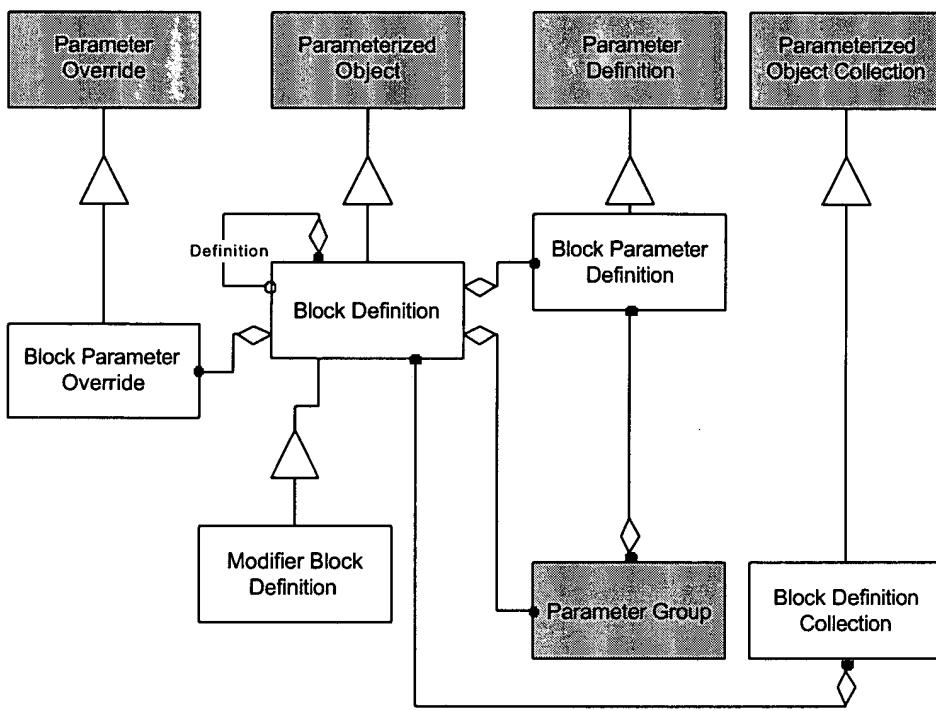


Figure 70. Block Definition Classes.

E K 0 4 4 2 0 0 7 7 9 U S

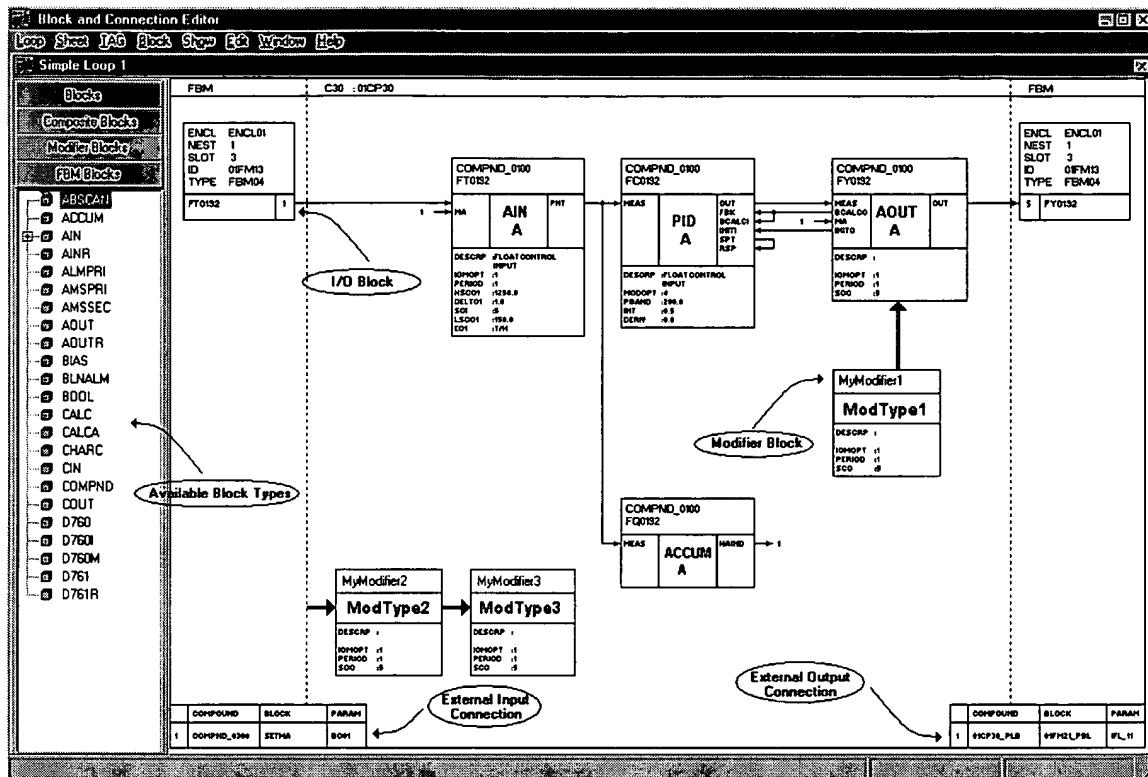


Figure 71 - Simple Loop

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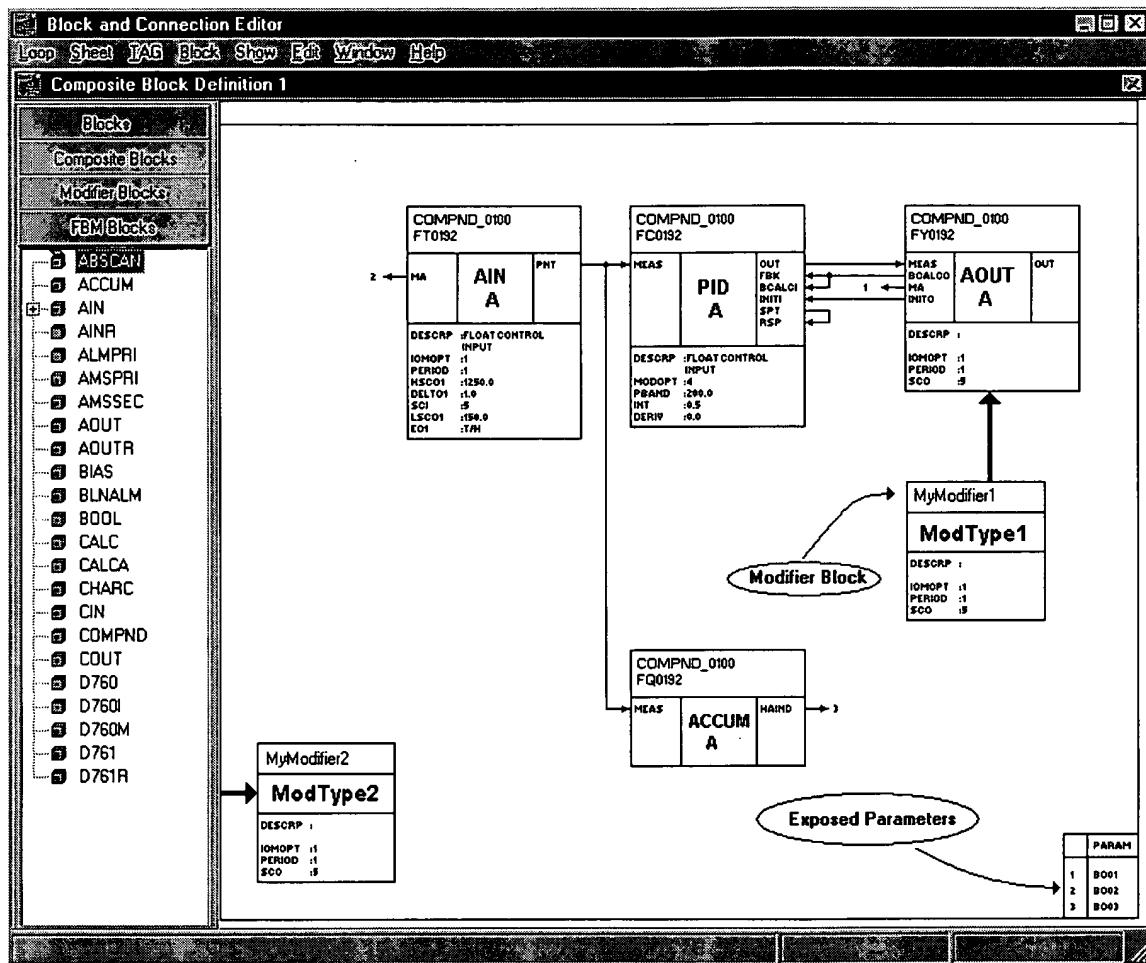


Figure 72 - Composite Block Definition

E K 0 4 4 2 0 0 7 7 9 U S

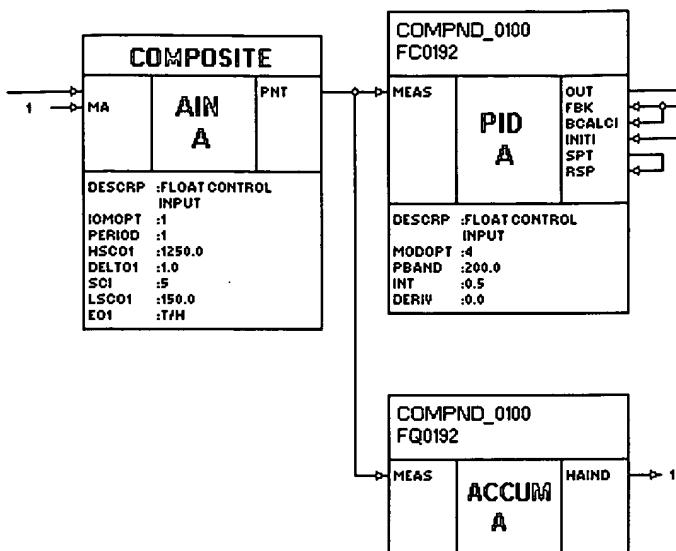


Figure 73 - Composite Block In Loop

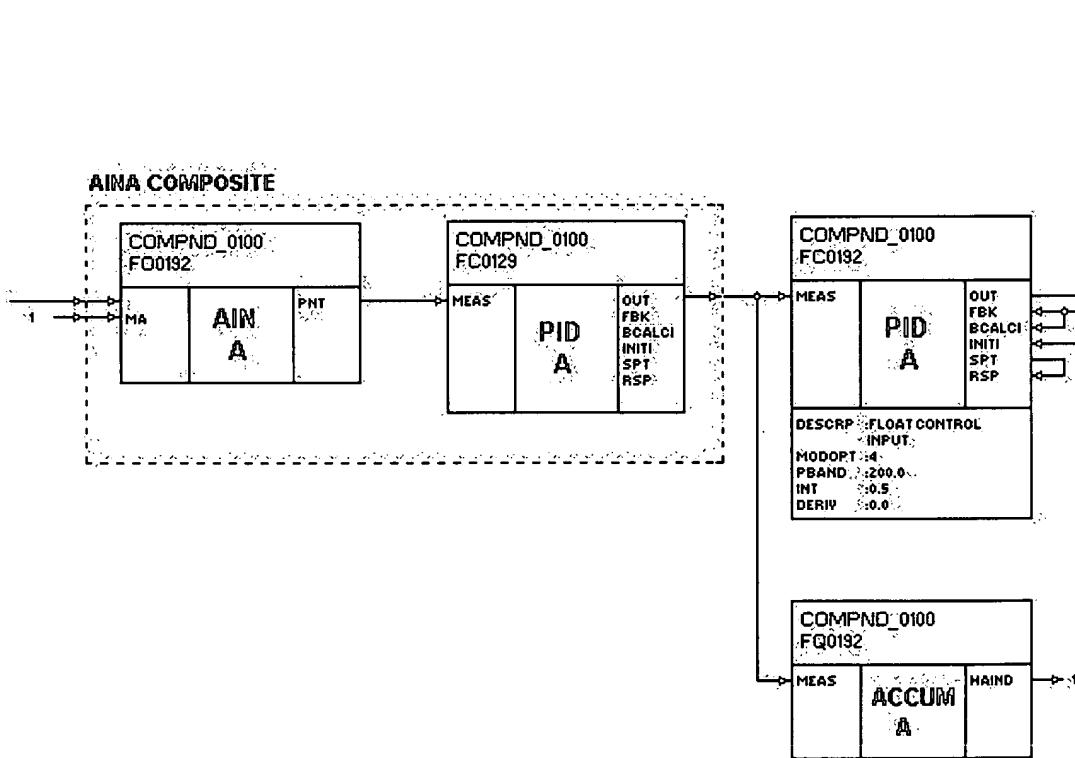


Figure 74 - Expanded Composite Block In Loop

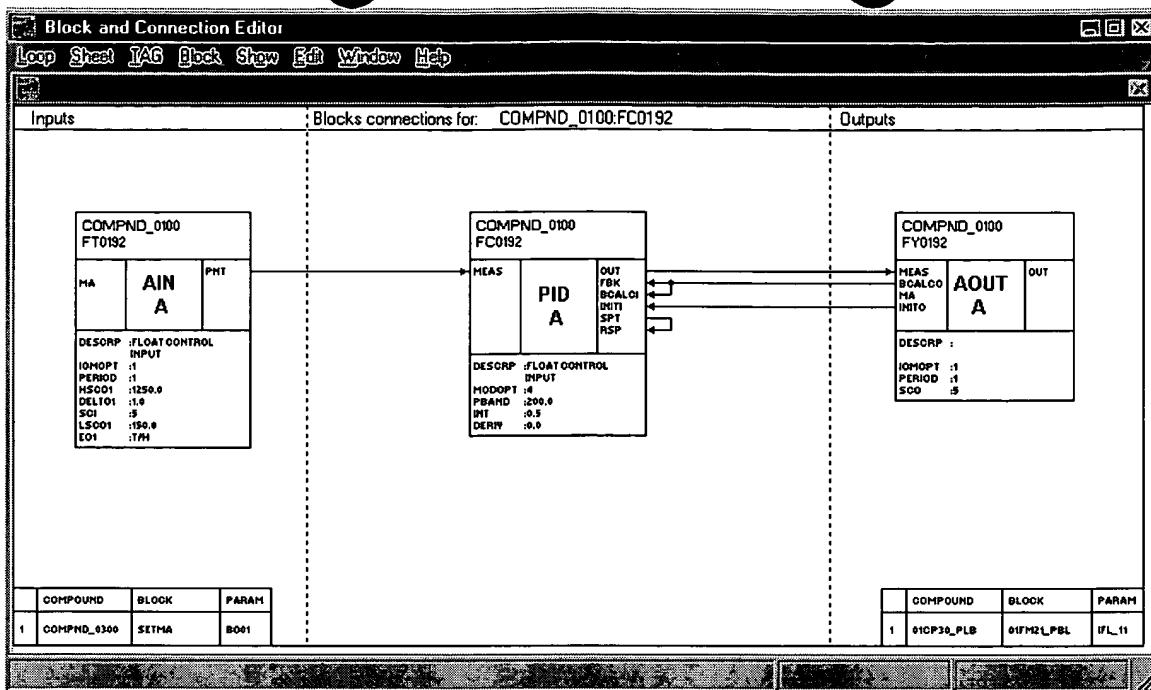


Figure 75 - Block with Connections

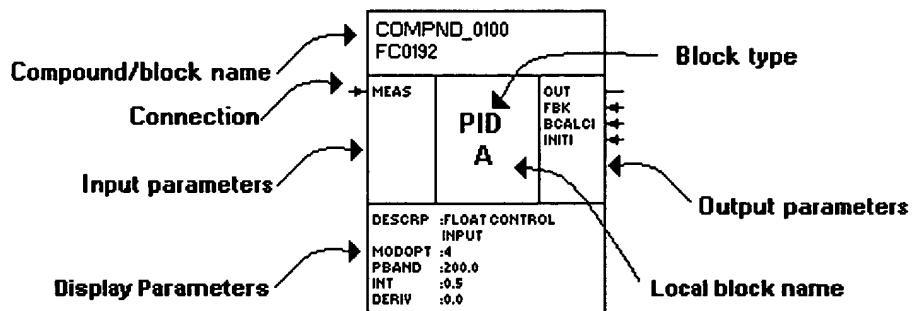


Figure 76 - Anatomy of a Block Placeholder

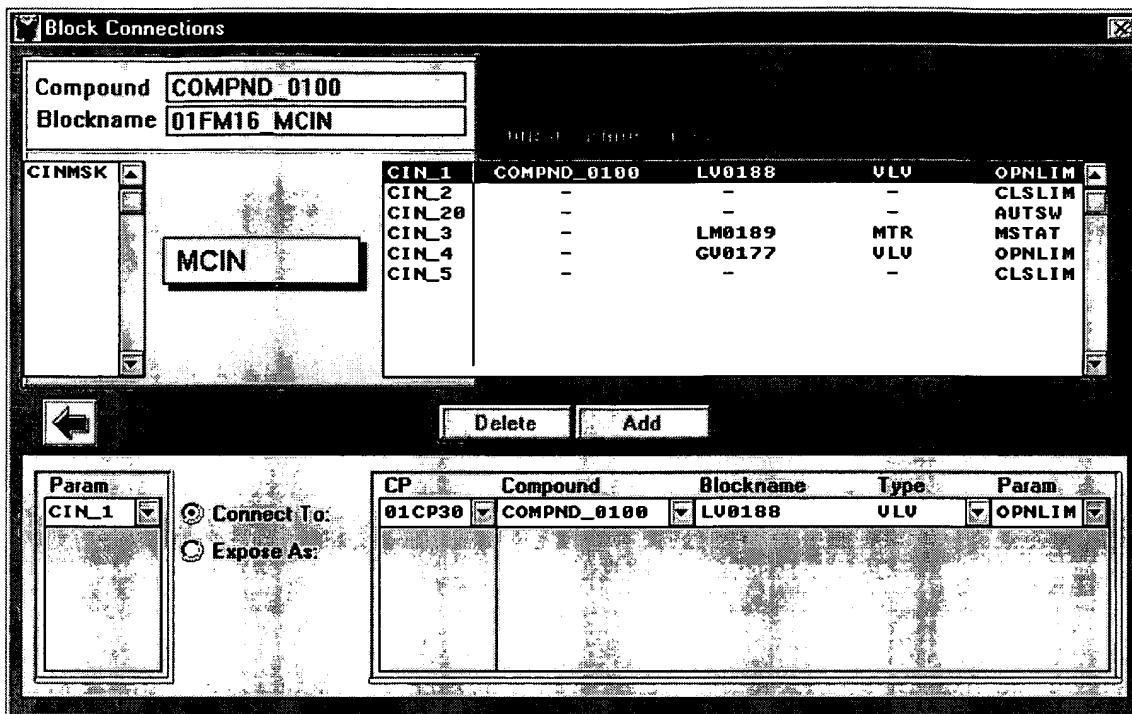


Figure 77 - Block Connection dialog

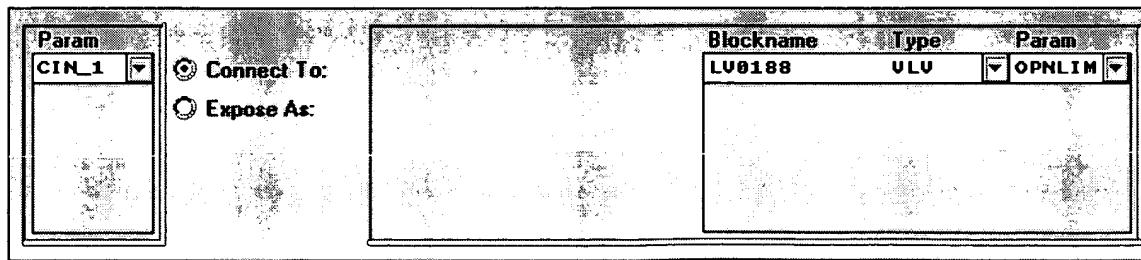


Figure 78 - Template/Definition Internal Connections

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Figure 79 - Template/Definition Exposed Connections

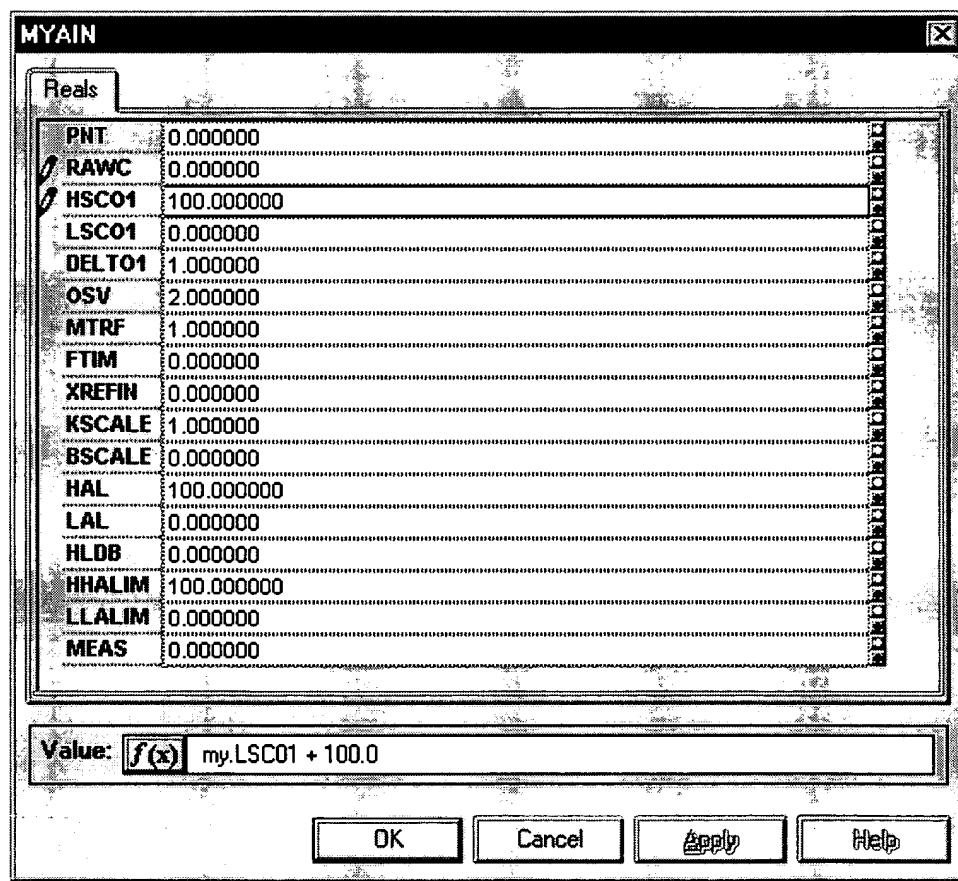


Figure 80 - Parameter Property Sheet

EK044200779US

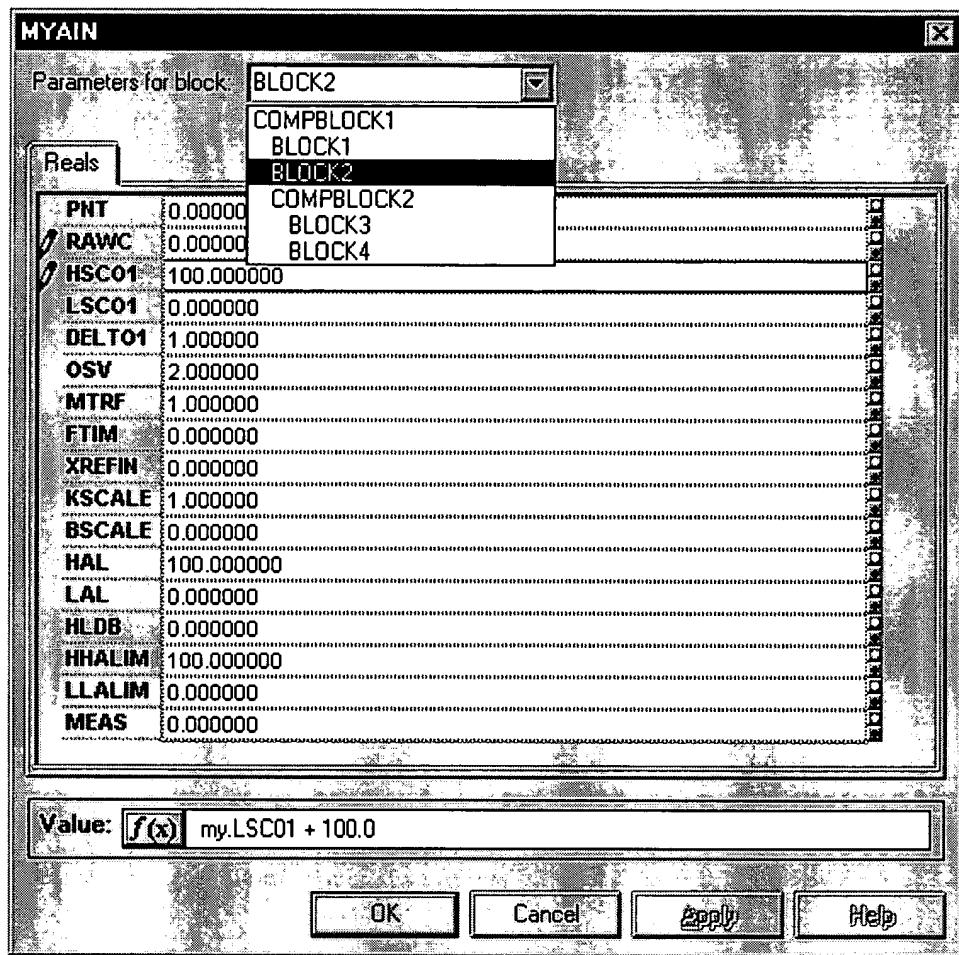


Figure 81 - Composite Block Property Sheet

EK044200779US

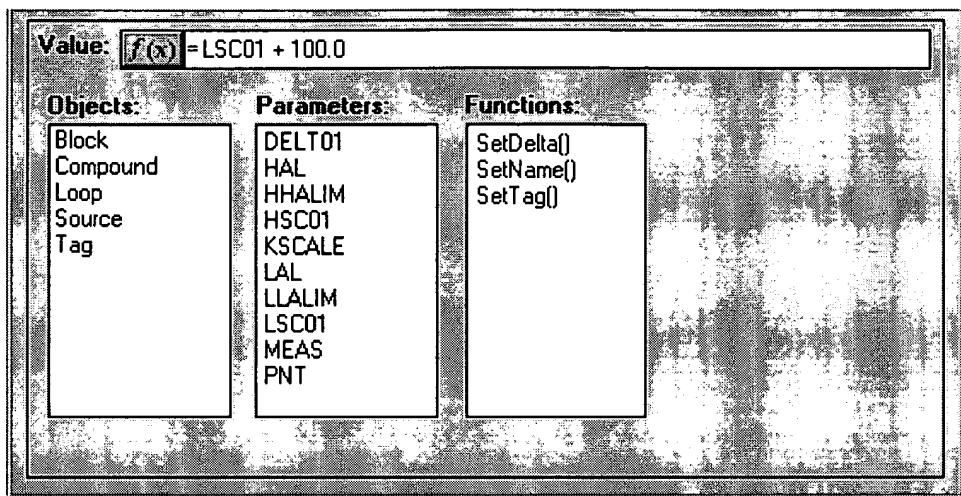


Figure 82 - Parameter Formula Builder

EK044200779US

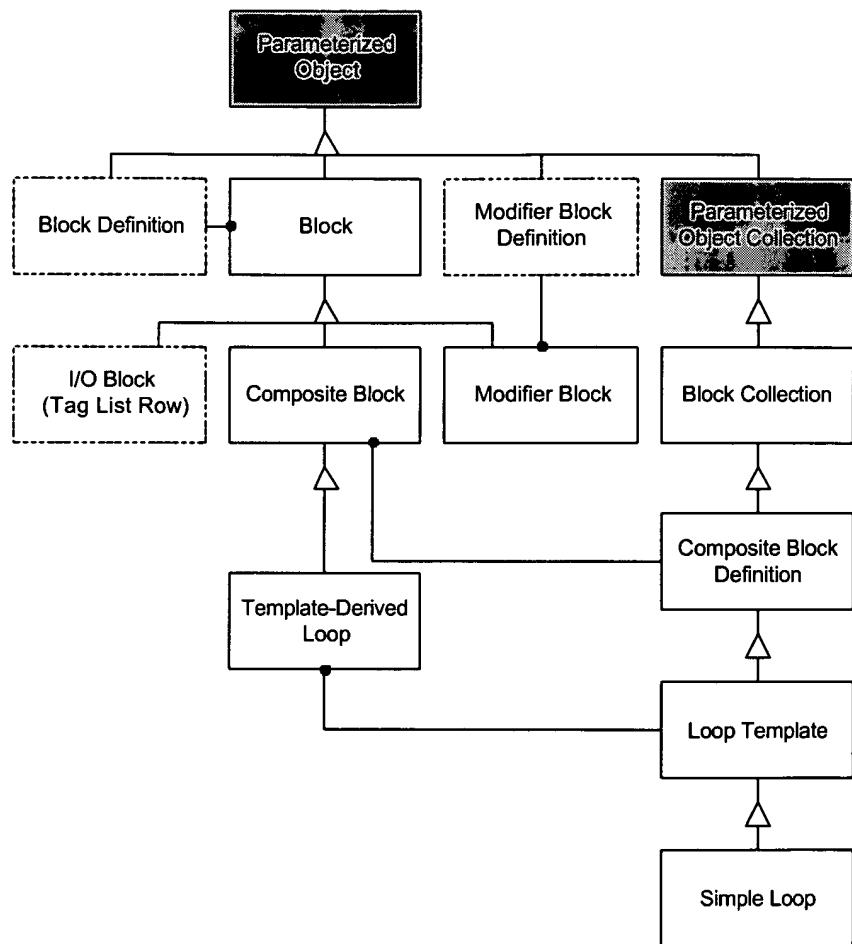


Figure 83 - Control Object derivations

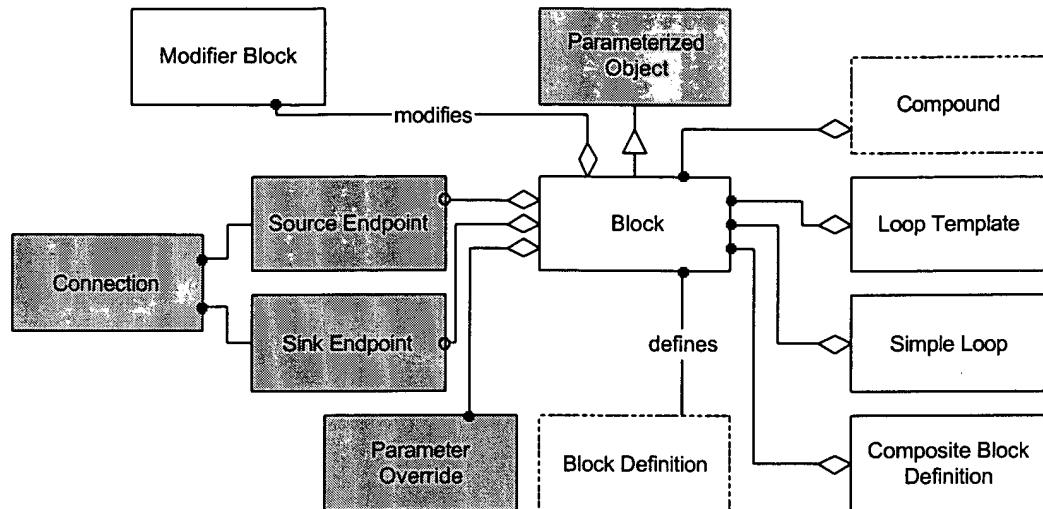


Figure 84 - Block object model

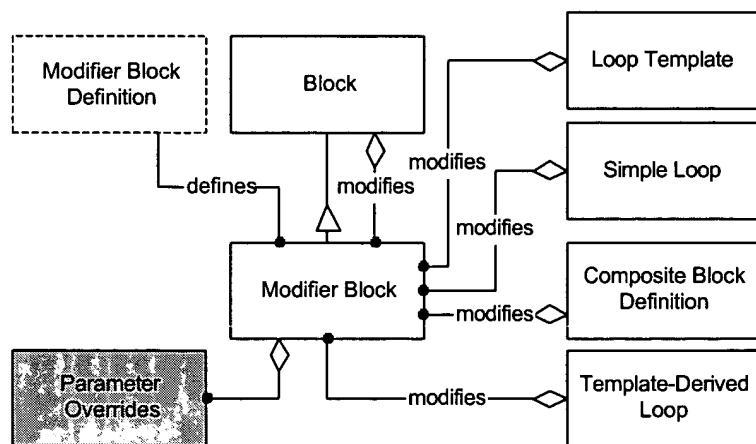


Figure 85 - Modifier Block object model

EK044200779US

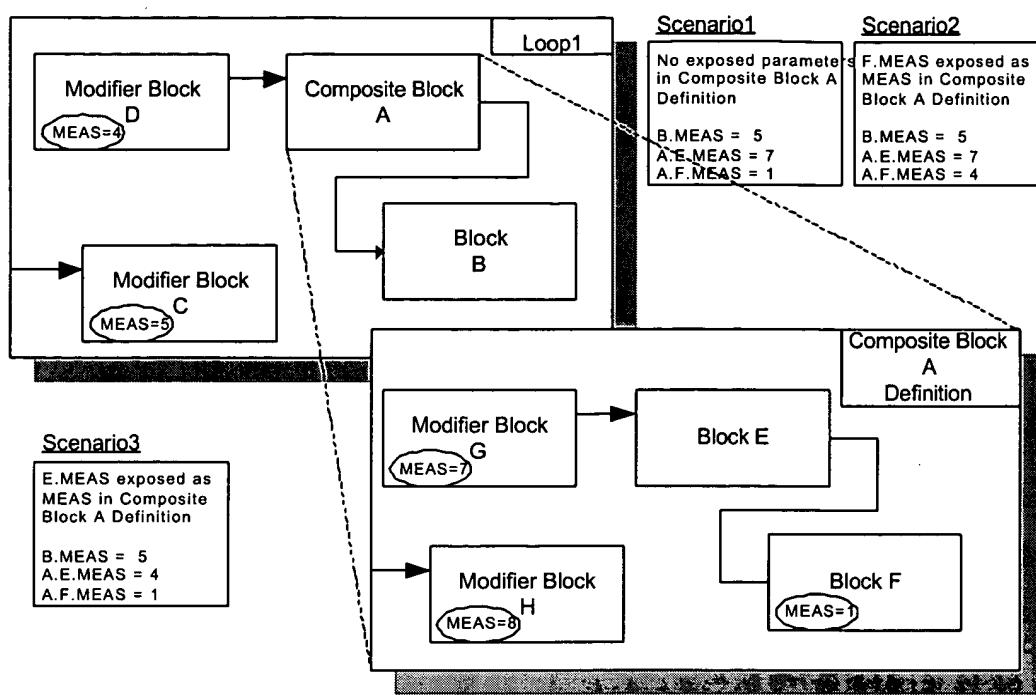


Figure 86 - Modifier Block Parameter override precedence

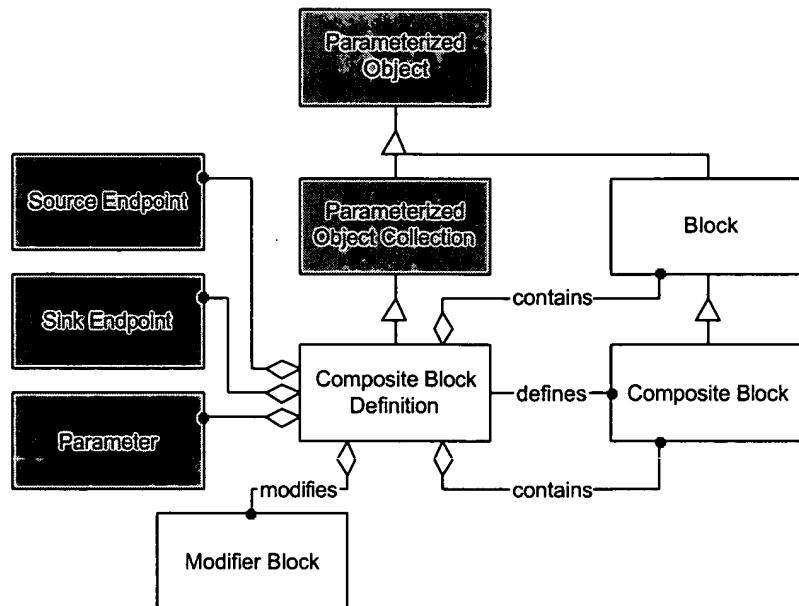


Figure 87 - Composite Block Definition object model

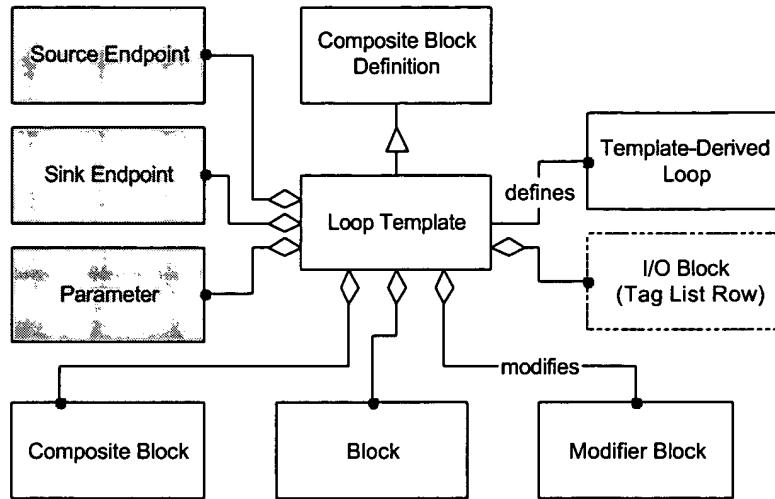


Figure 88 - Loop Template object model

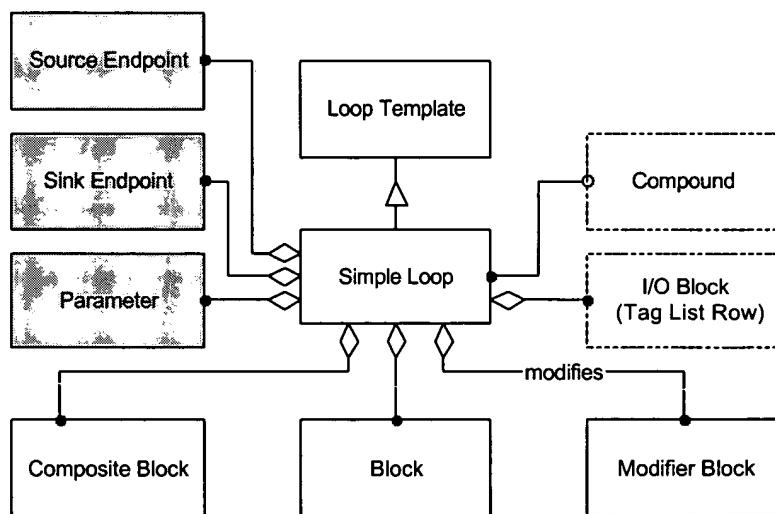


Figure 89 - Simple Loop object model

E K 0 4 4 2 0 0 7 7 9 U S

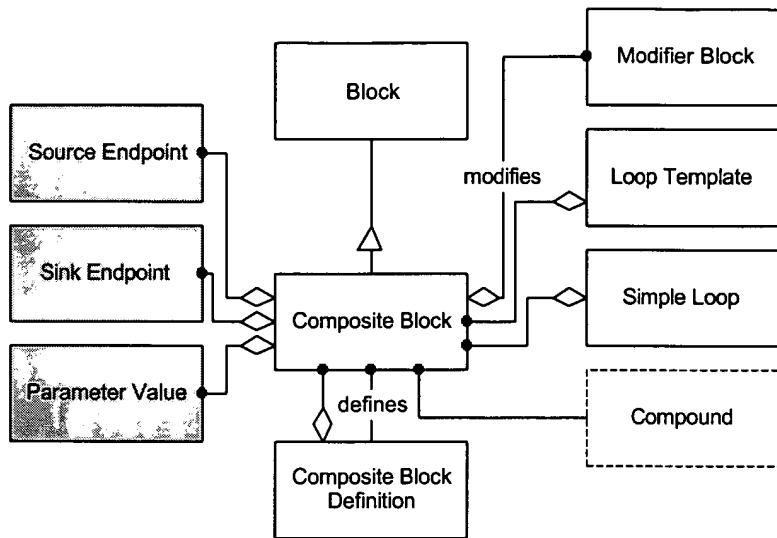


Figure 90 - Composite Block object model

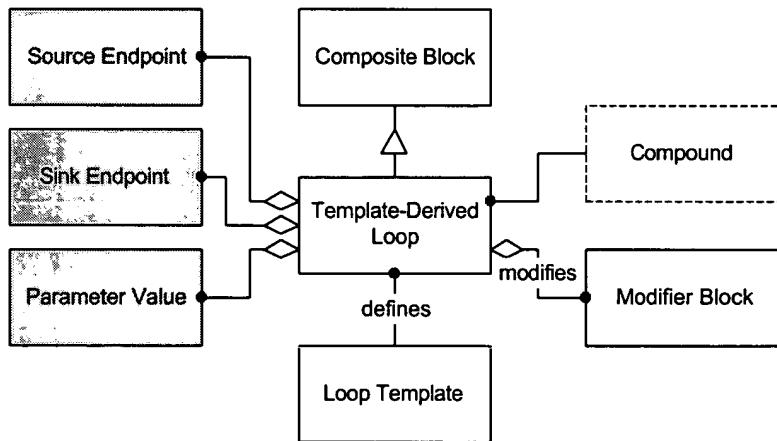


Figure 91 - Template-Derived Loop object model

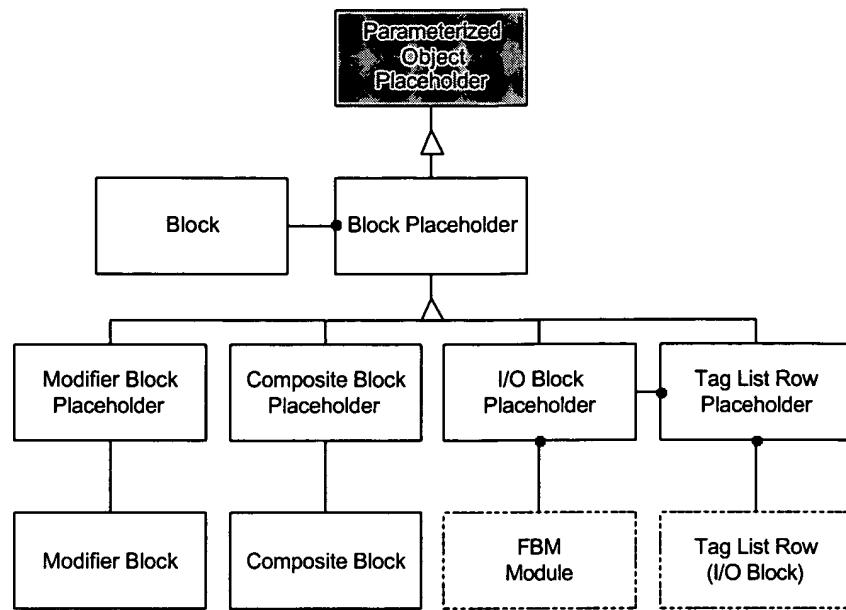


Figure 92 - Object Placeholder derivations

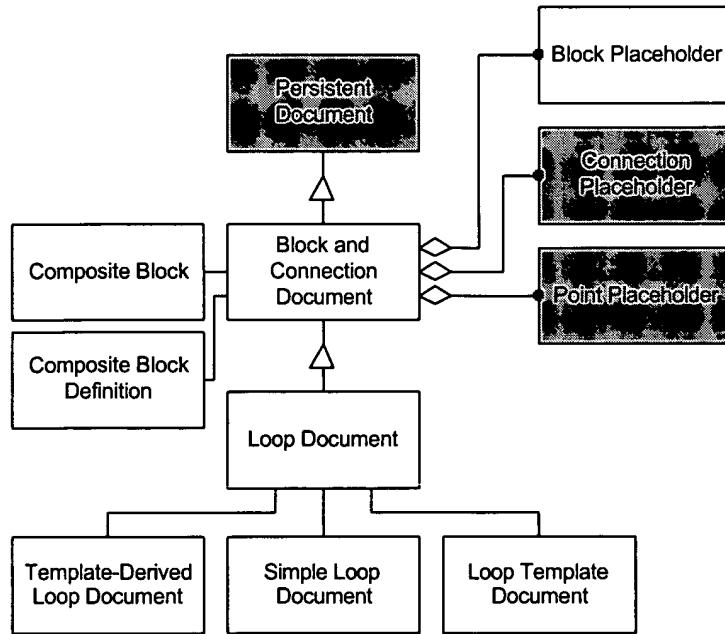


Figure 93 - Persistent Document Object derivations

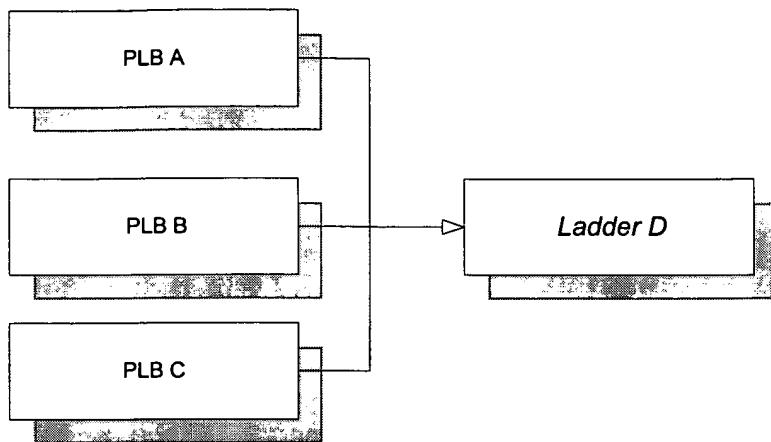


Figure 94 - PLB to Ladder Relationship

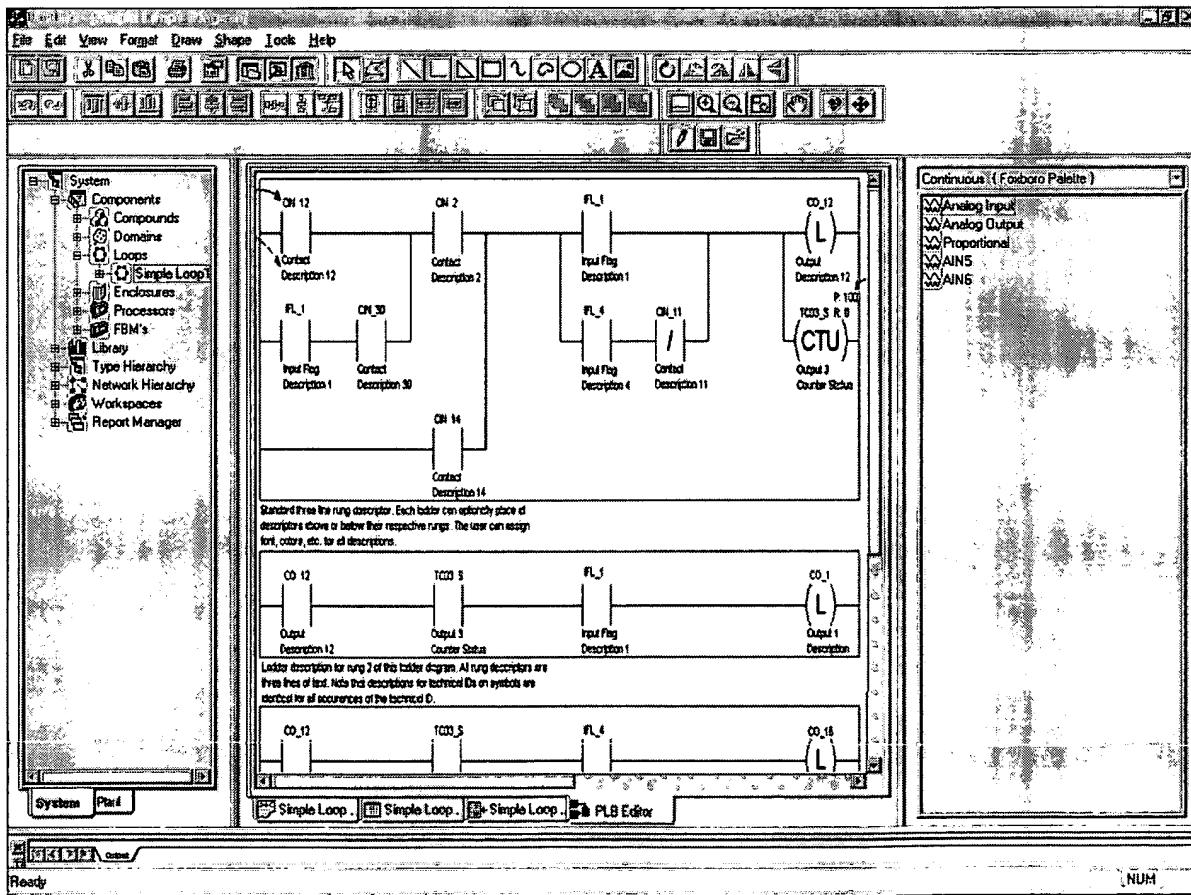


Figure 95 - Ladder Editor View

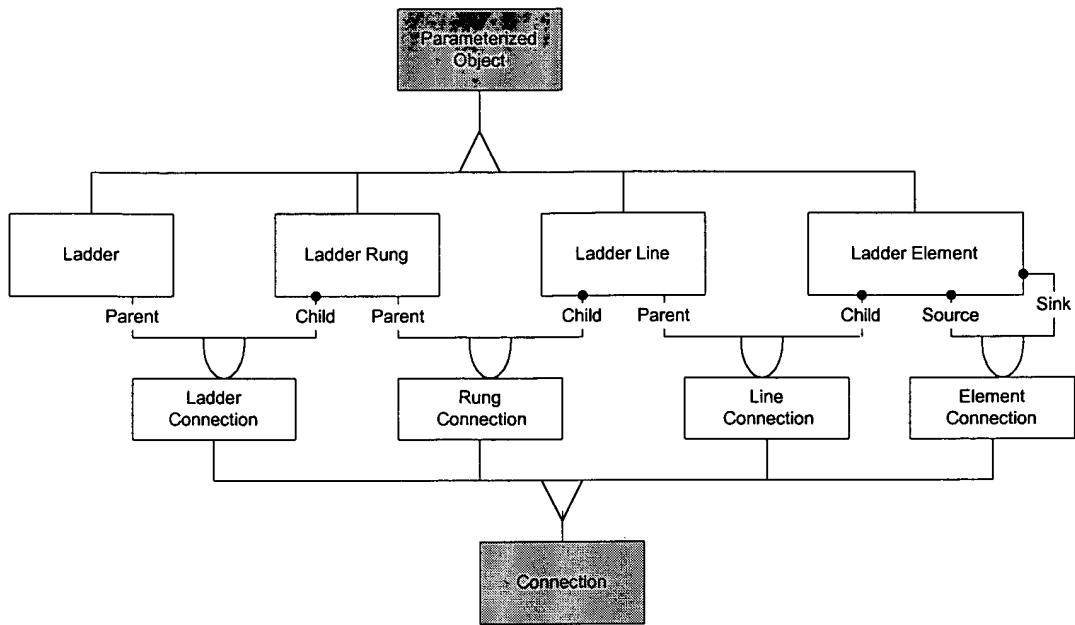


Figure 96 - Ladder Objects

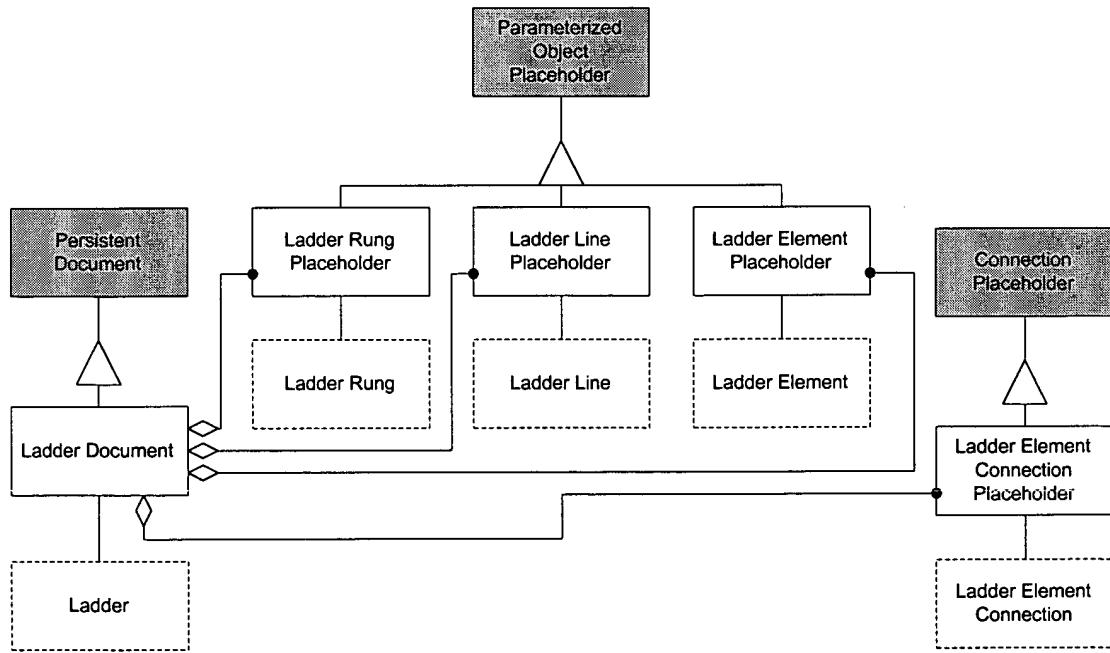


Figure 97 - Persistent Document Objects.

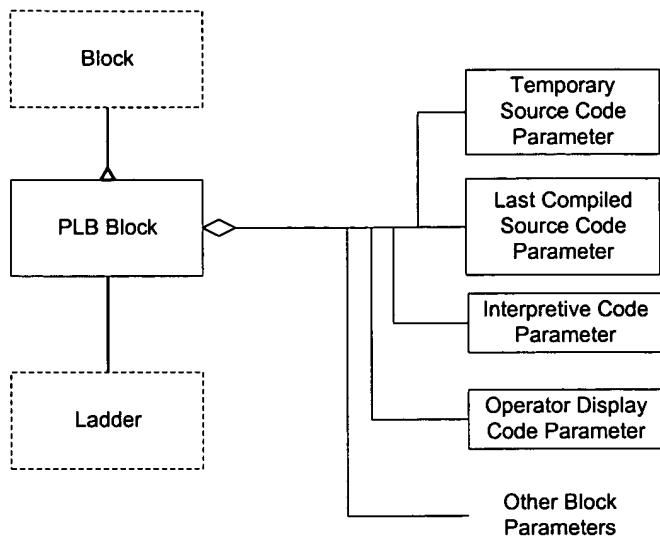


Figure 98 - PLB Block Model

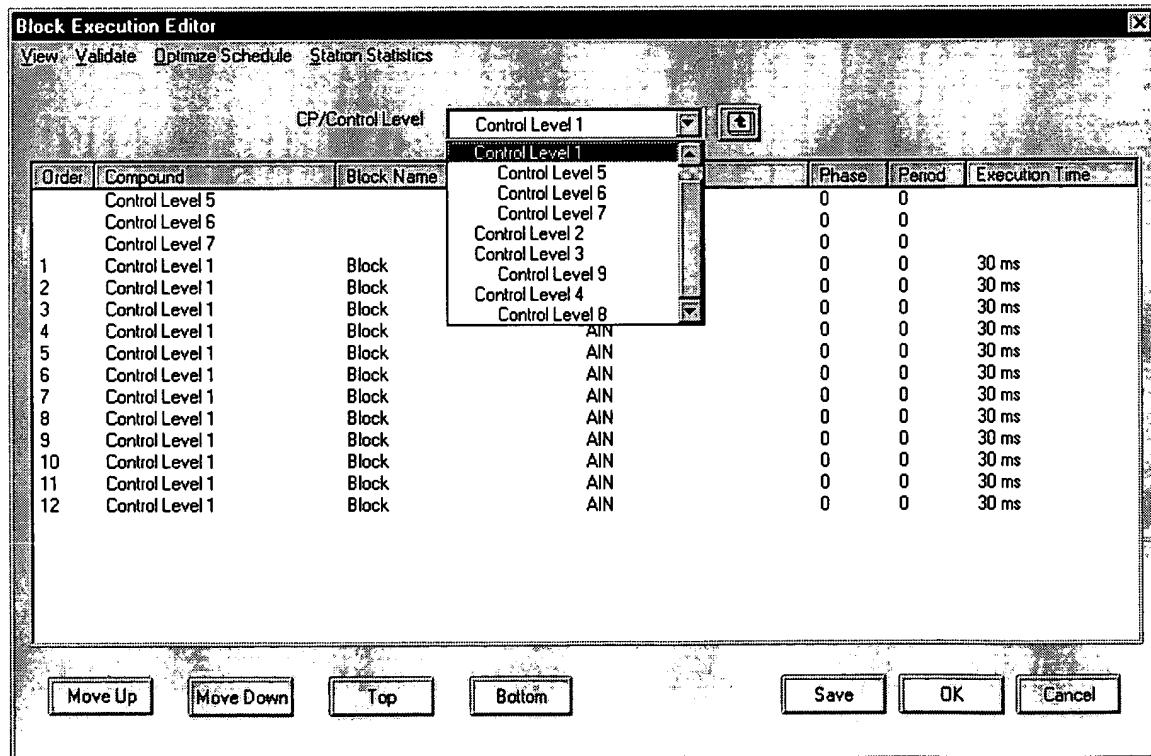


Figure 99 - Block Execution Scheduler Editor

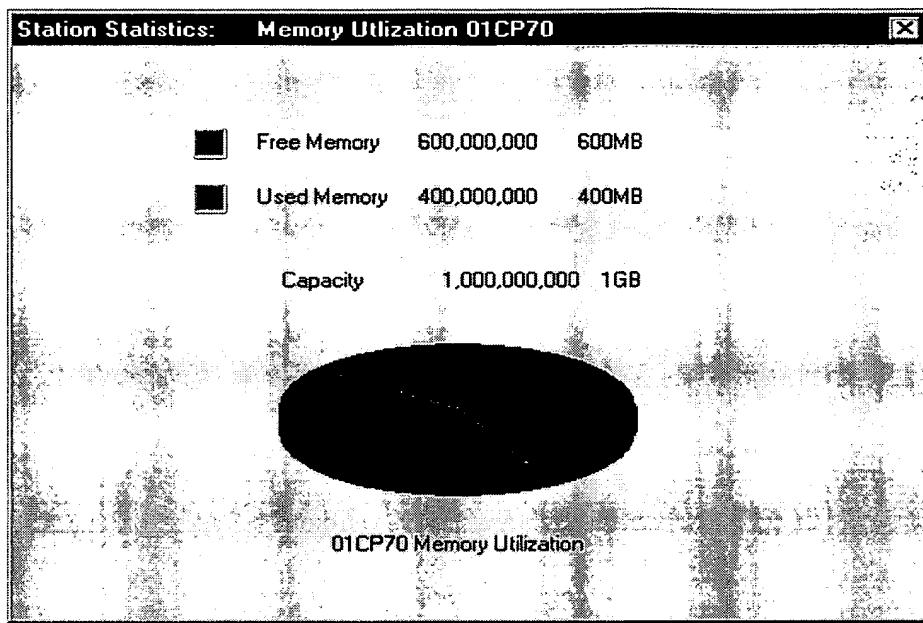


Figure 100 Station Statistics Dialog

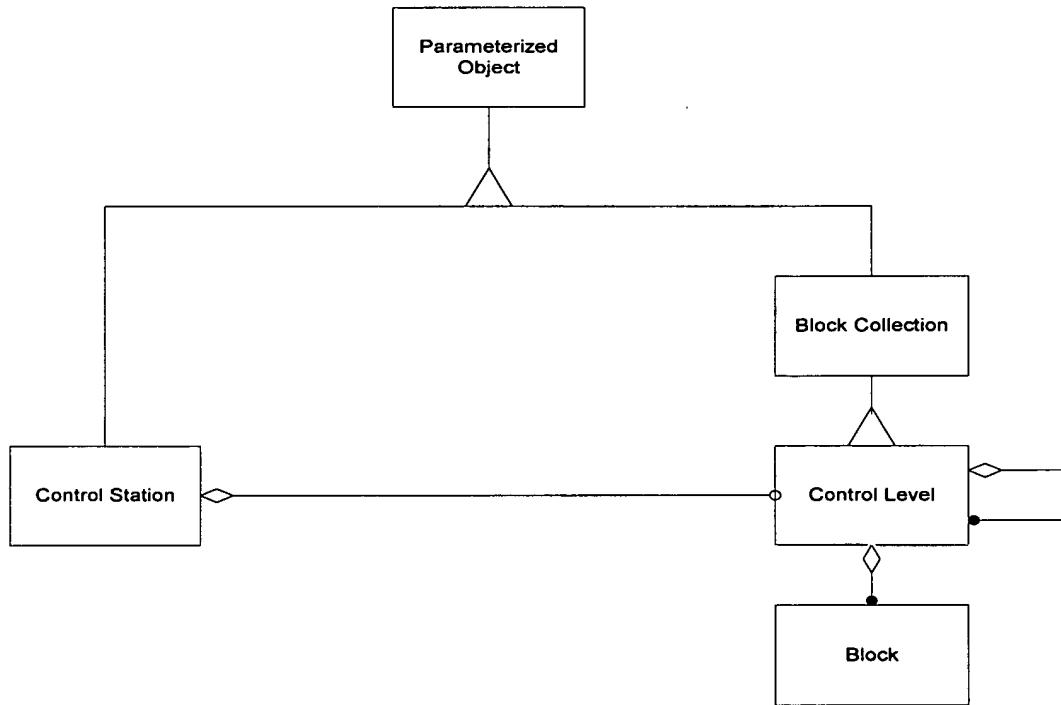


Figure 101 - Block Execution Editor Object Model

TAG List

Compnd	Tag	L_Tag	Descrp1	Descrp2	Type	Comp	Param	Iom_id	Iomide
01CP30_PLB	GV0144	X0120A	CONTACT INPUT		PLB	A1	CIN_8	01FM21	
01CP30_PLB	X0120A	X0120	INPUT 1 TO LADDER	LOGIC	PLB	A1	CIN_4	01FM21	
01CP30_PLB	X0120B	X0120	INPUT 2 TO LADDER	LOGIC	PLB	A2	CIN_5	01FM21	
01CP30_PLB	X0120C	X0120	INPUT 3 TO LADDER	LOGIC	PLB	A3	CIN_6	01FM21	
01CP30_PLB	X0120D	X0120	INPUT 4 TO LADDER	LOGIC	PLB	A4	CIN_7	01FM21	
01CP30_PLB	X0120E	X0120	OUTPUT 1 F. LADDER	LOGIC	PLB	A5	CO_9	01FM21	01FM22
01CP30_PLB	X0120F	X0120	OUTPUT 2 F. LADDER	LOGIC	PLB	A6	CO_10	01FM21	01FM22
01CP30_PLB	X0120G	X0120	OUTPUT 3 F. LADDER	LOGIC	PLB	A7	CO_11	01FM21	01FM22
01CP30_PLB	X0120H	X0120	OUTPUT 3 F. LADDER	LOGIC	PLB	A8	CO_12	01FM21	01FM22
02CP30_PLB	HV0210CLOSE	HV0210	VALVE DEVICE LIMIT	CLOSE	PLB	A2	CIN_2	02FM15	
02CP30_PLB	HV0210OC	HV0210	VALVE OPEN CLOSE	SWITCH	PLB	A3	CO_9	02FM15	02FM16
02CP30_PLB	HV0210OPEN	HV0210	VALVE DEVICE LIMIT	OPEN	PLB	A1	CIN_1	02FM15	
2022NAPHTHA	F0215	F0215			AIN	A	PNT	11FM11	
2022NAPHTHA	F0215V	F0215			AOUT	A	OUT	11FM11	
2022NAPHTHA	F0216	F0215			AIN	B	PNT	11FM11	
2022NAPHTHA	F0216V	F0215			AOUT	B	OUT	11FM11	
2022NAPHTHA	F0217	F0215			AIN	C	PNT	11FM11	
2022NAPHTHA	F0217V	F0215			AOUT	C	OUT	11FM11	
2022NAPHTHA	F0218	F0215			AIN	D	PNT	11FM11	
2022NAPHTHA	F0218V	F0215			AOUT	D	OUT	11FM11	
COMPND_0100	F0120	F0120	FLOAT MEASUREMENT	INPUT 1	AIN	A	PNT	01FM14	
COMPND_0100	F0130	F0120	FLOAT MEASUREMENT	INPUT 2	AIN	B	PNT	01FM14	
COMPND_0100	FT0100	F0100	FLOAT	INDICATION	AIN	A	PNT	01FM11	
COMPND_0100	FT0101	F0101	FLOAT	INDICATION	AIN	A	PNT	01FM11	

Figure 102 - Tag List Data Entry Screen

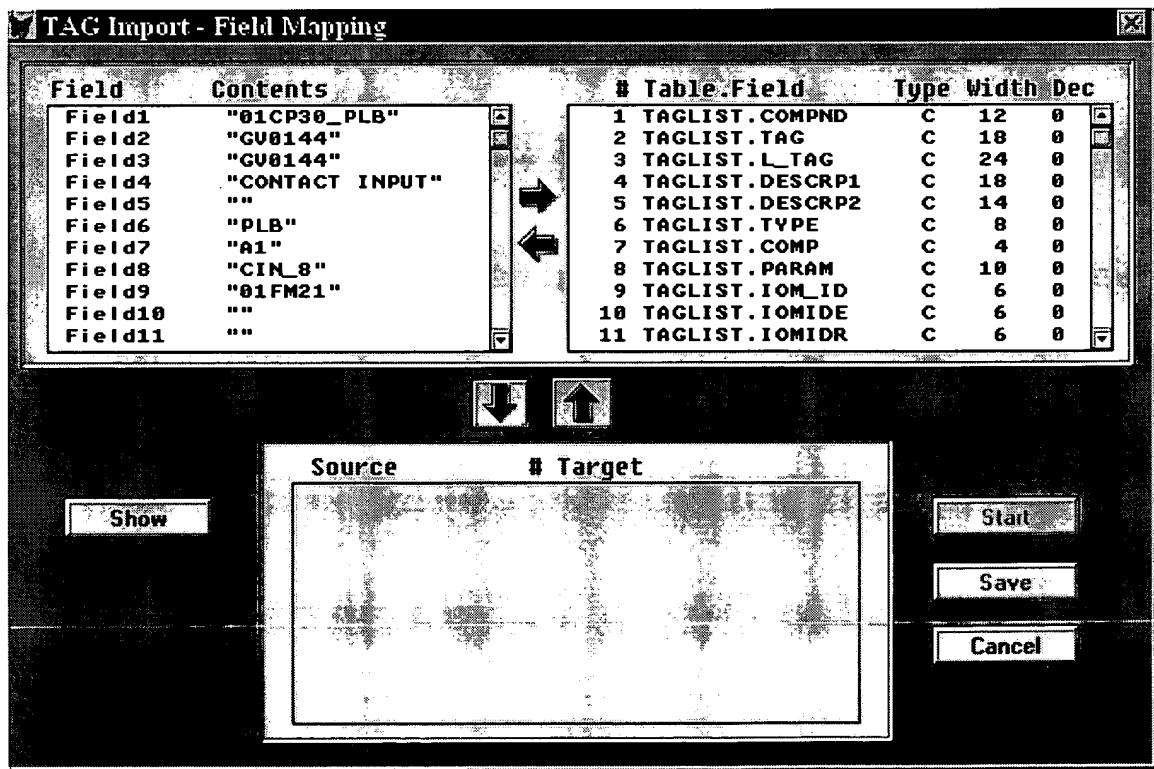


Figure 103 - Tag List Import from ASCII File

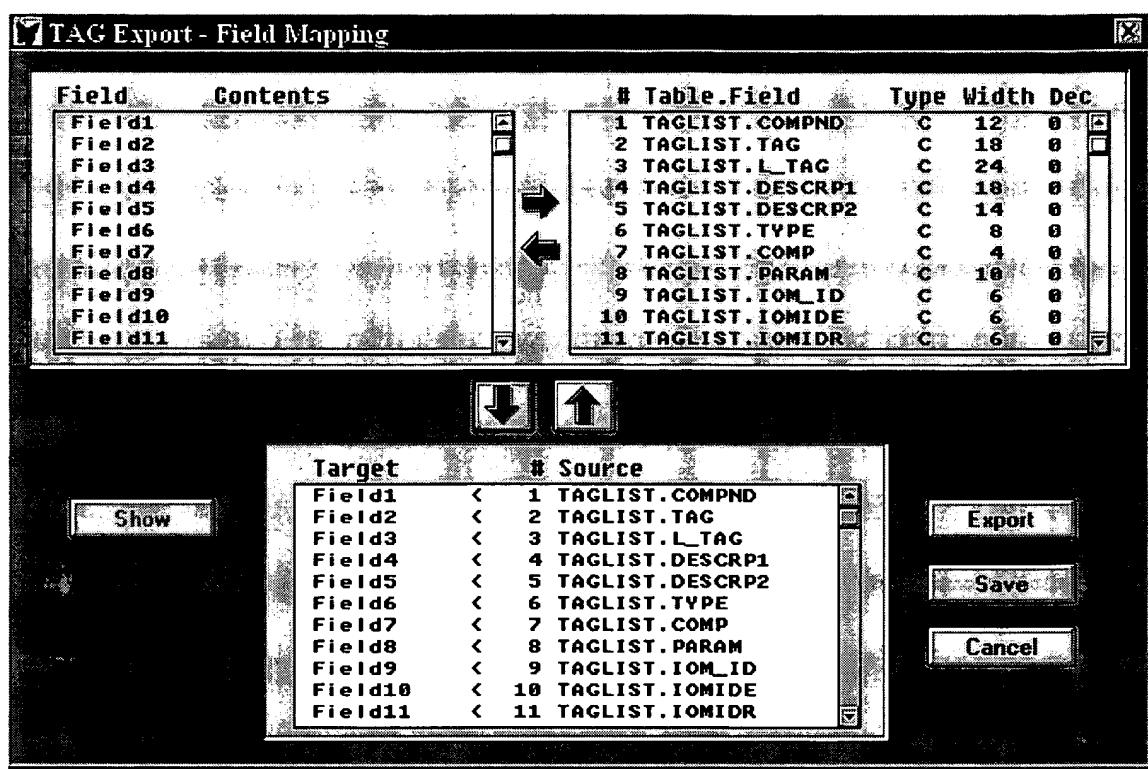


Figure 104 - Tag List Export to ASCII File

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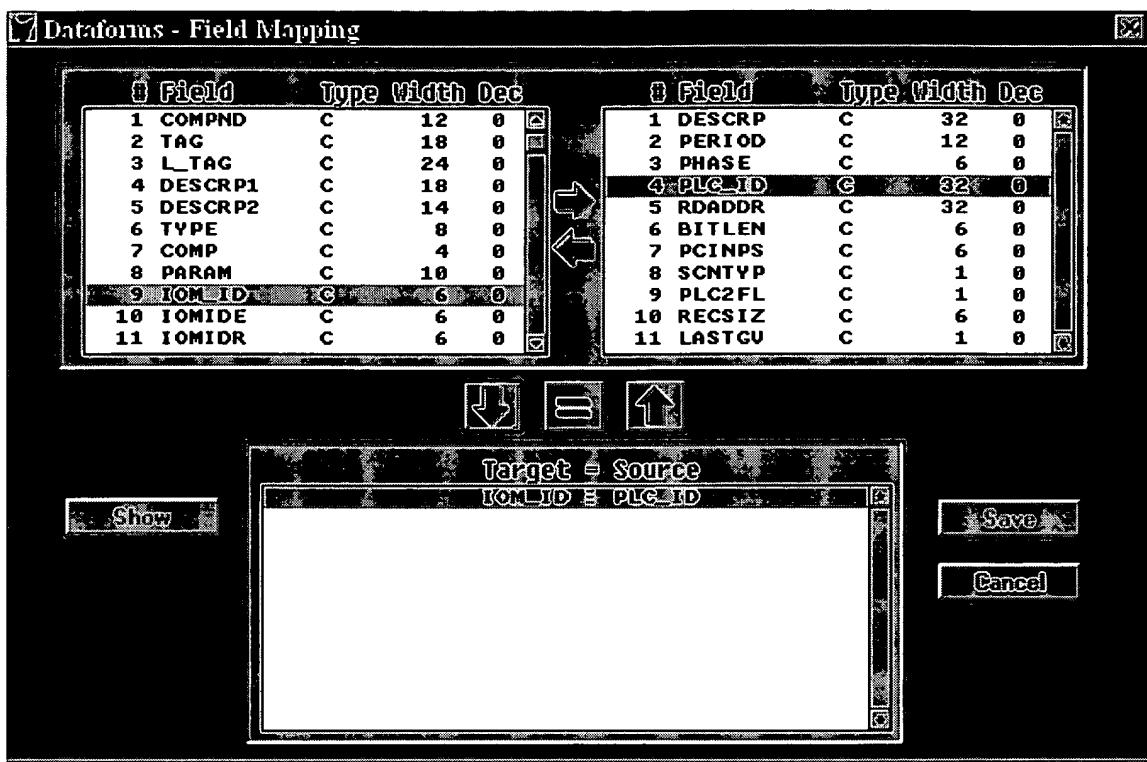


Figure 105 - Tag List Import / Export from Database Table

E K 0 4 4 2 0 0 7 7 9 U S

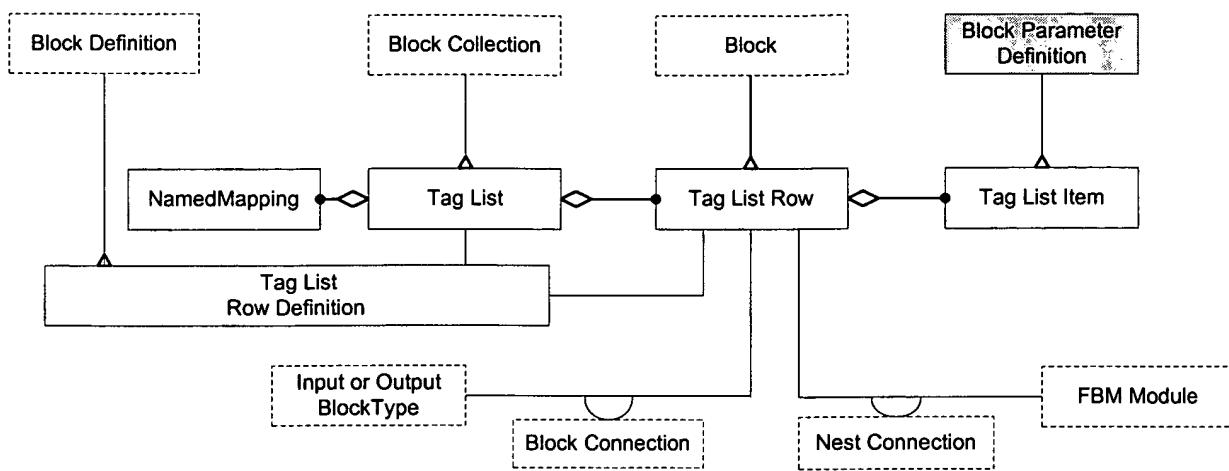


Figure 106 - Tag List Object Model

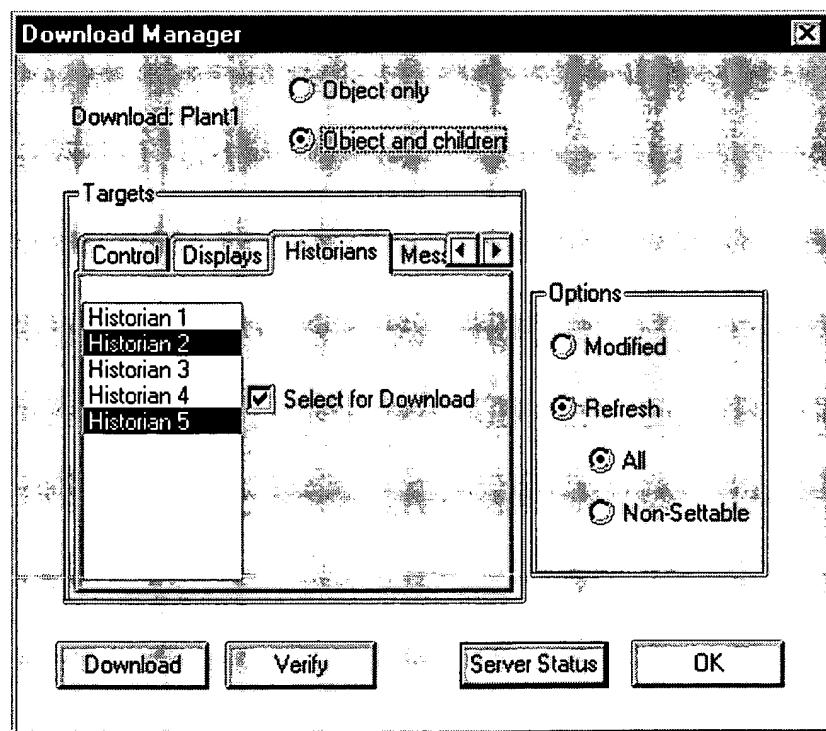


Figure 107 - Download Target Selection

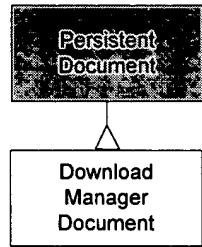


Figure 108 - Download Manager Document Object

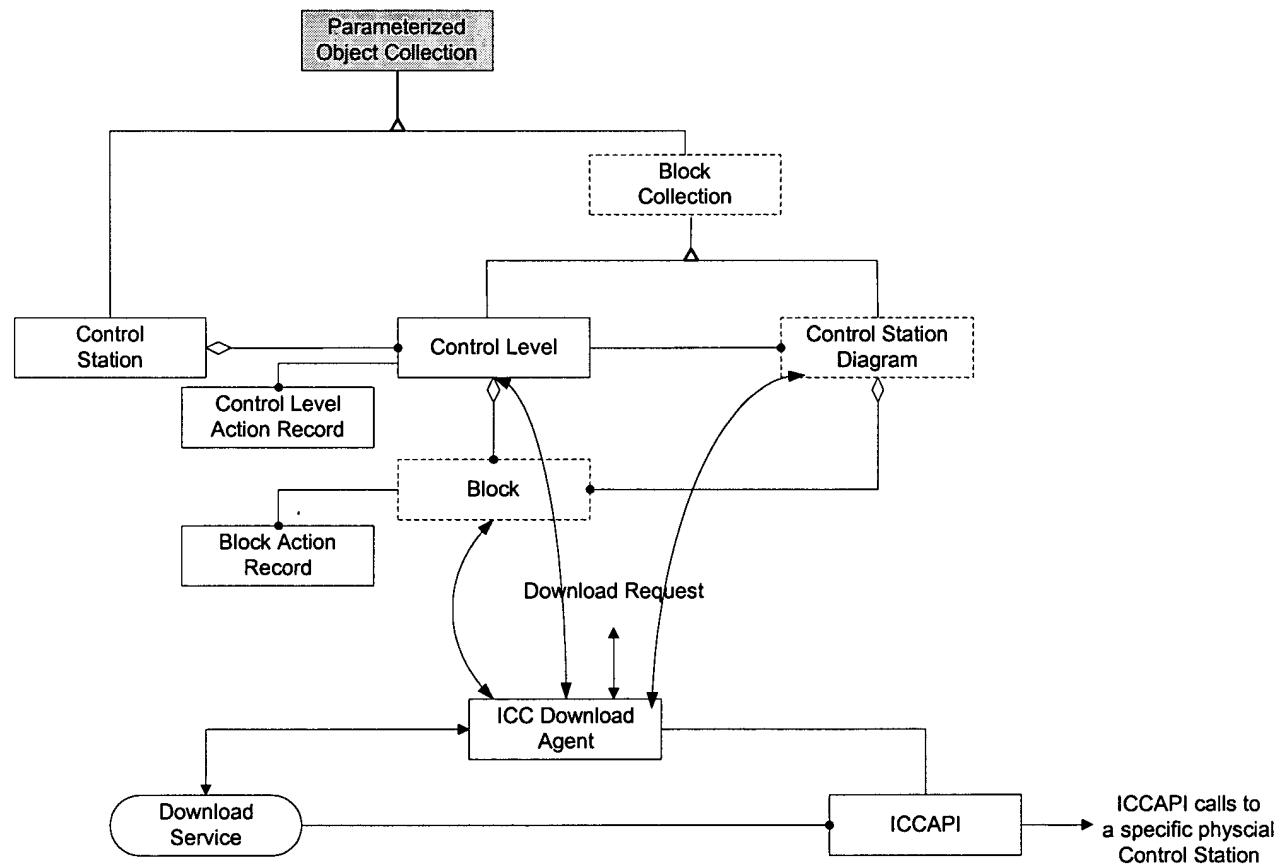


Figure 109 - Download Services Object Model

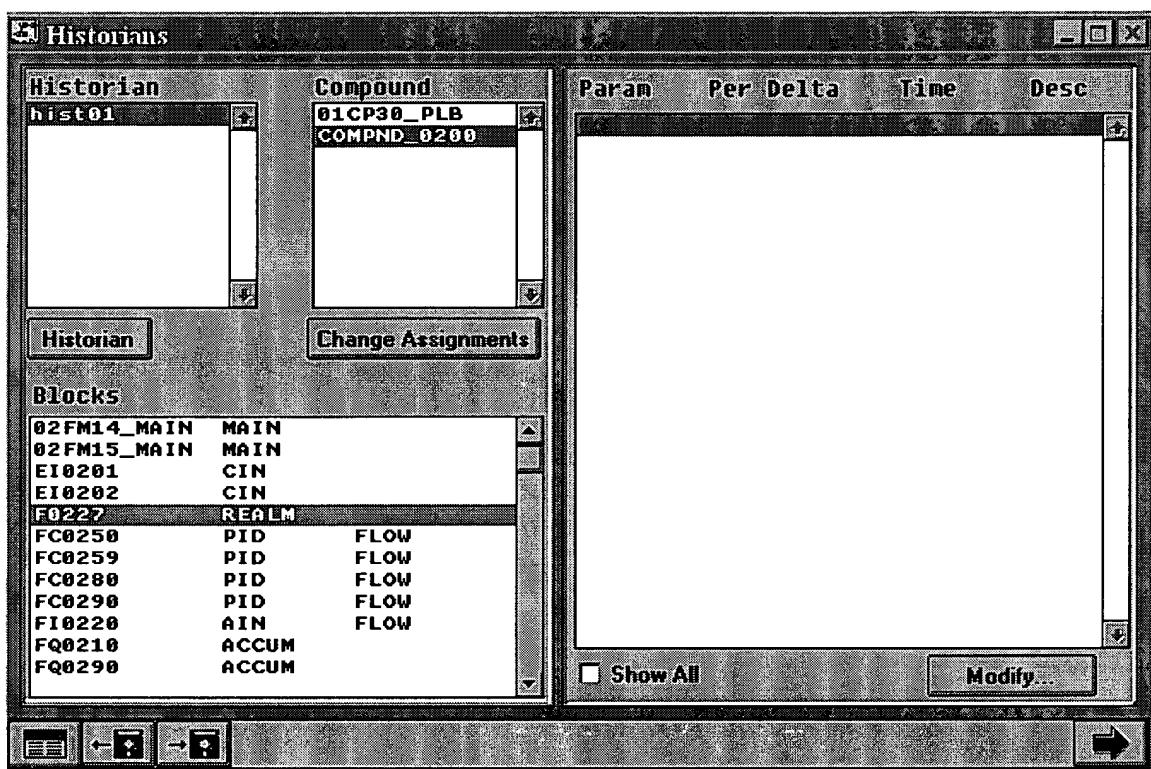


Figure 110 - Historian Assignment Overview

E K 0 4 4 2 0 0 7 7 9 U S

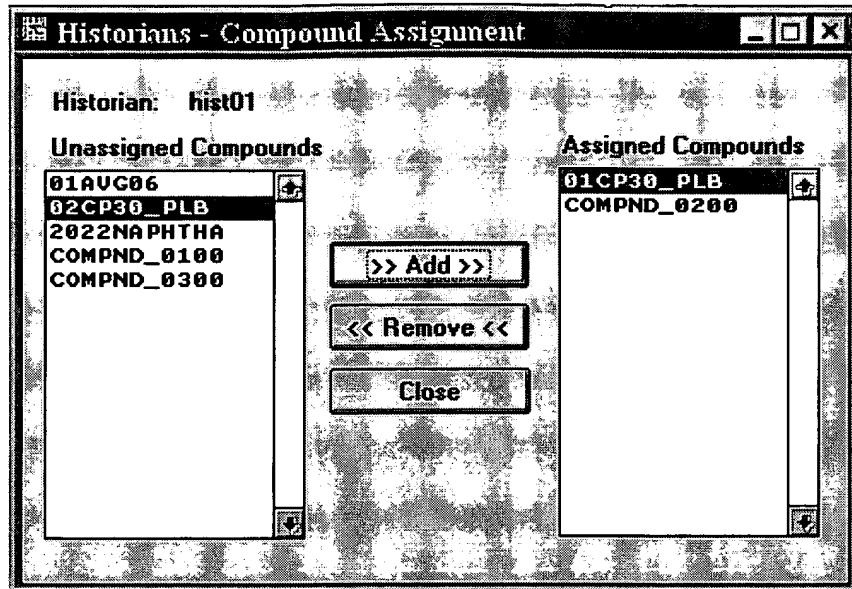


Figure 111 - Individual Compound Assignment

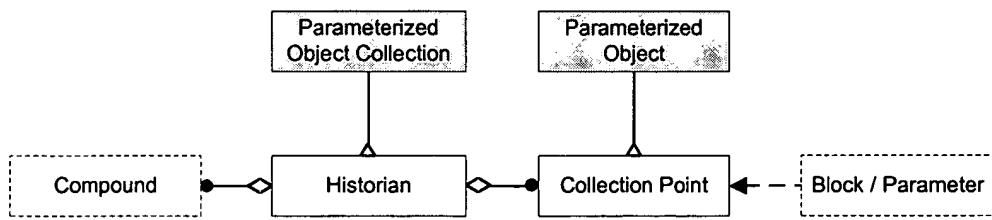


Figure 112 - Historian Object Model

EK044200779US

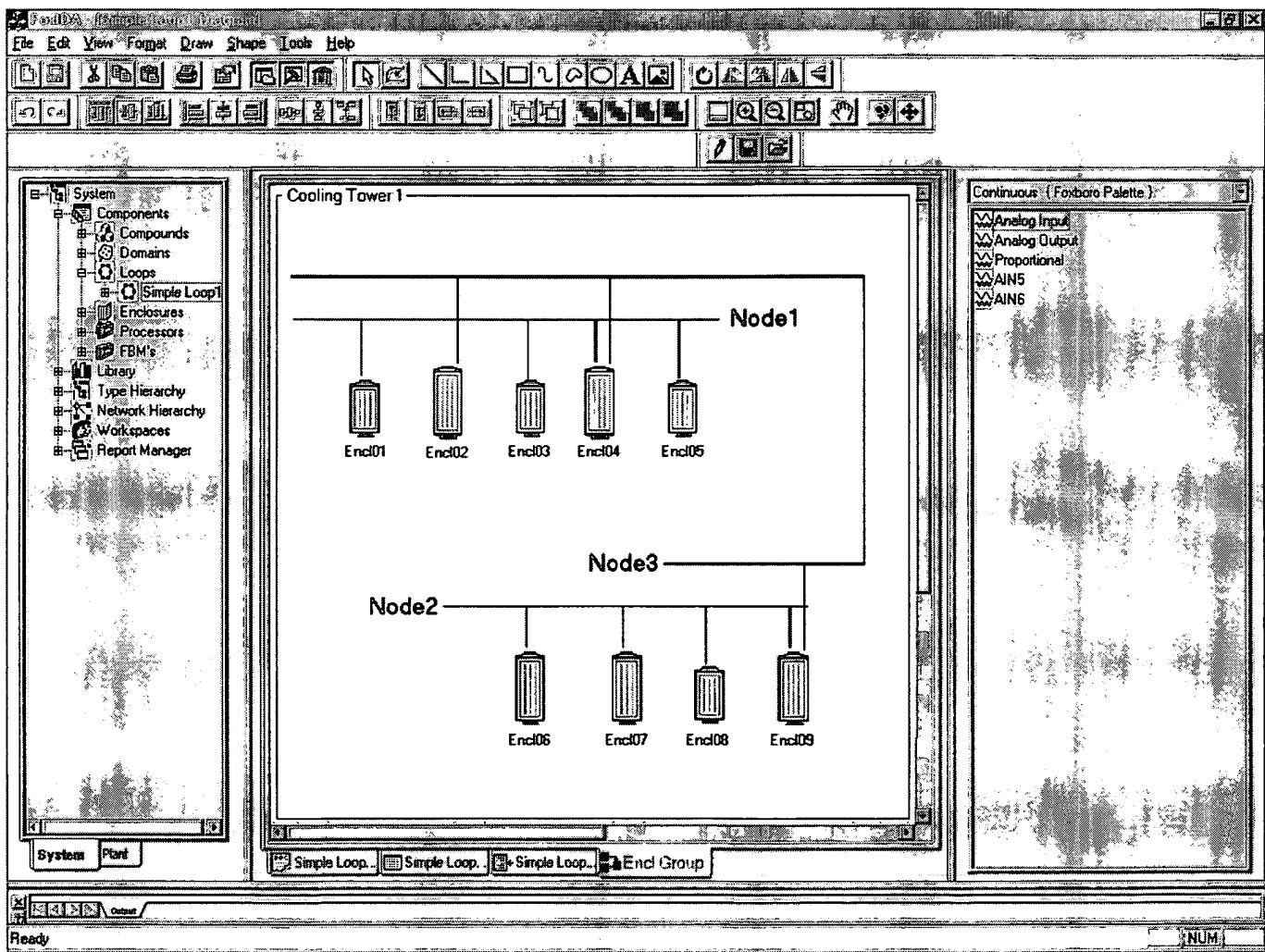


Figure 113 - Enclosure Group View

E K 0 4 4 2 0 0 7 7 9 U S

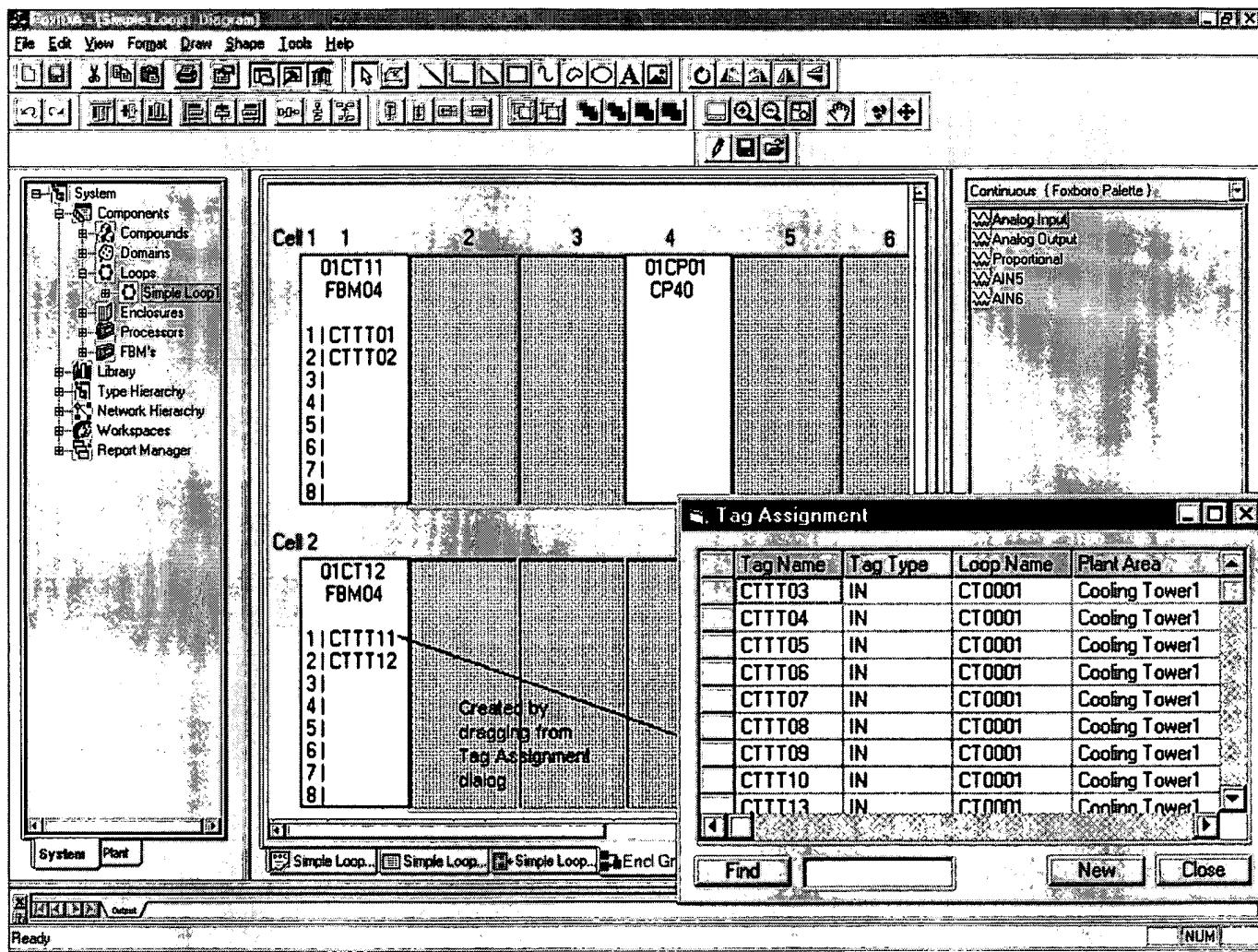


Figure 114 - Enclosure Loading View and Tag Assignment Dialog

E K 0 4 4 2 0 0 7 7 9 U S

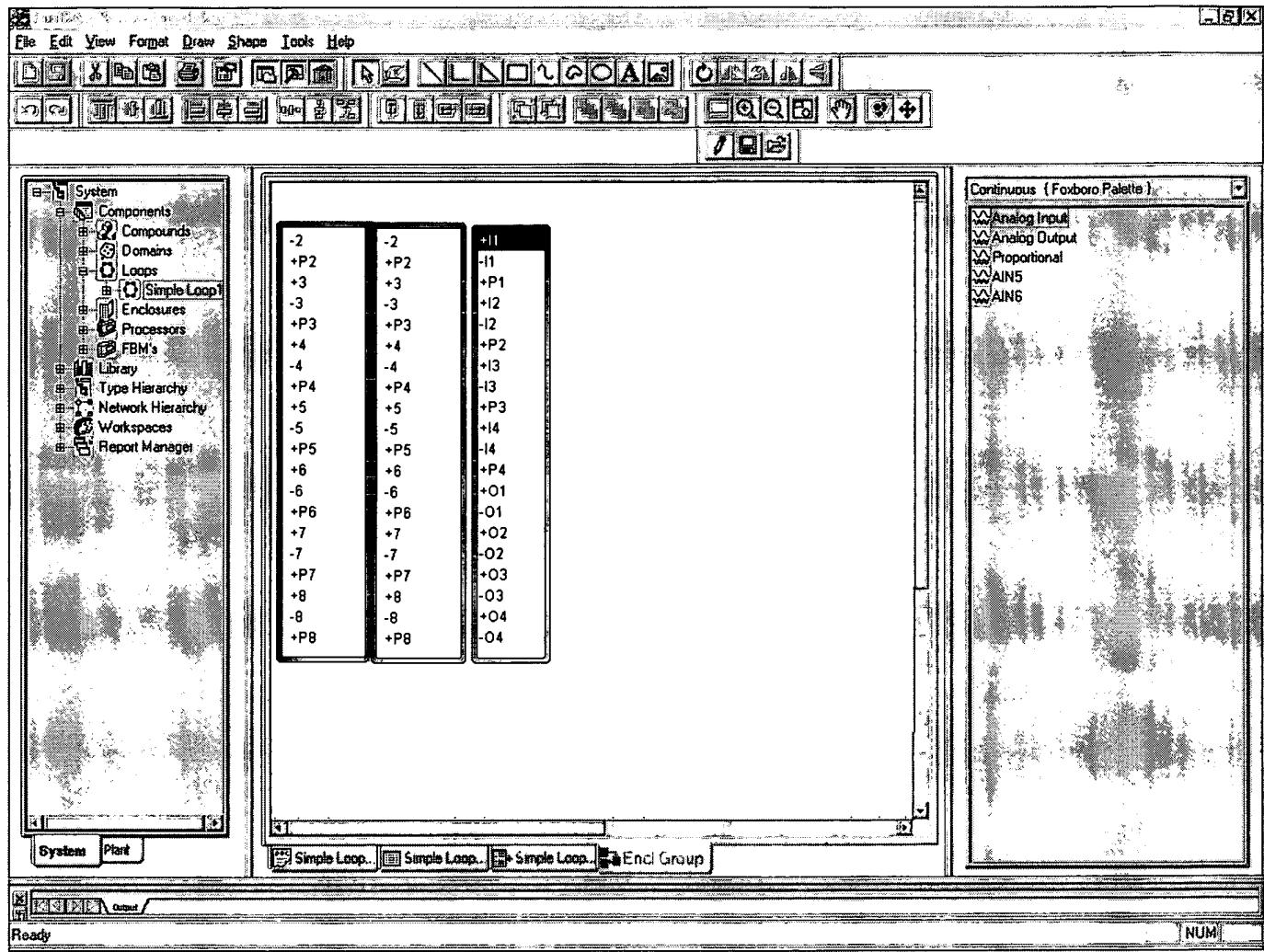


Figure 115 - Enclosure Input/Output Termination View

E K 0 4 4 2 0 0 7 7 9 U S

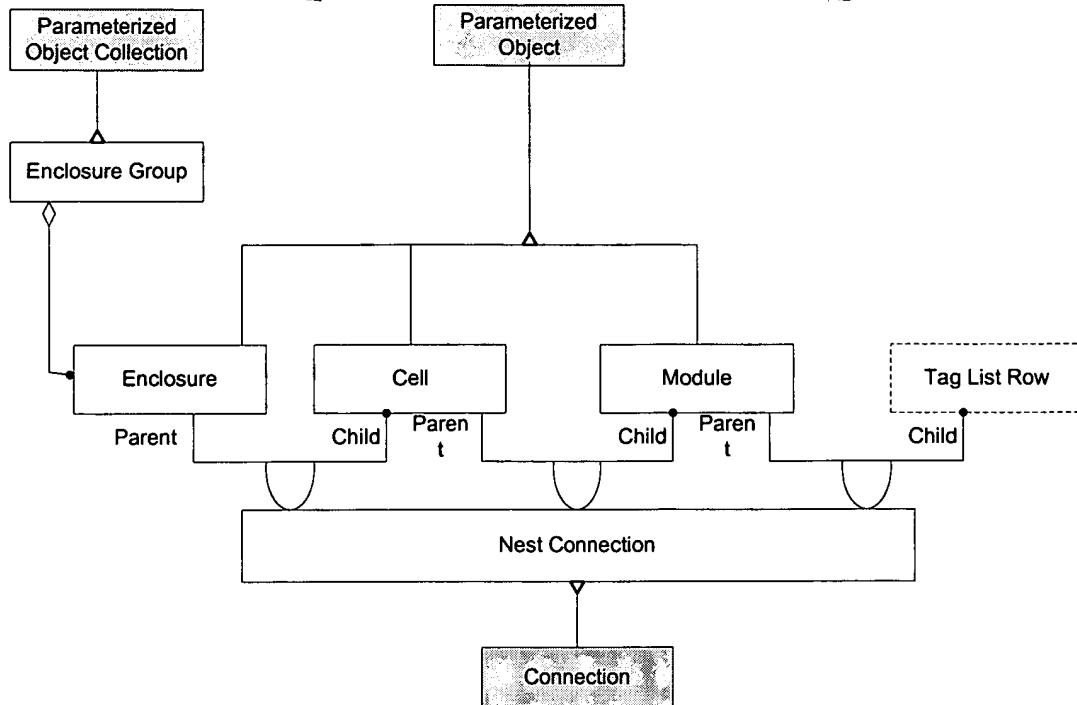


Figure 116 - Enclosure Loading Model

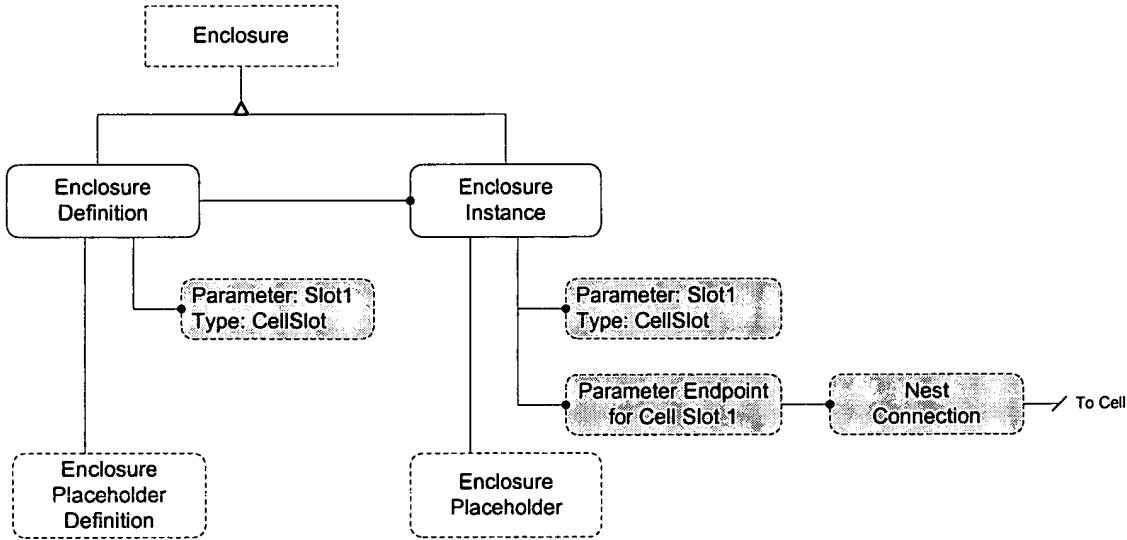


Figure 117 - Enclosure Definition Detail Model

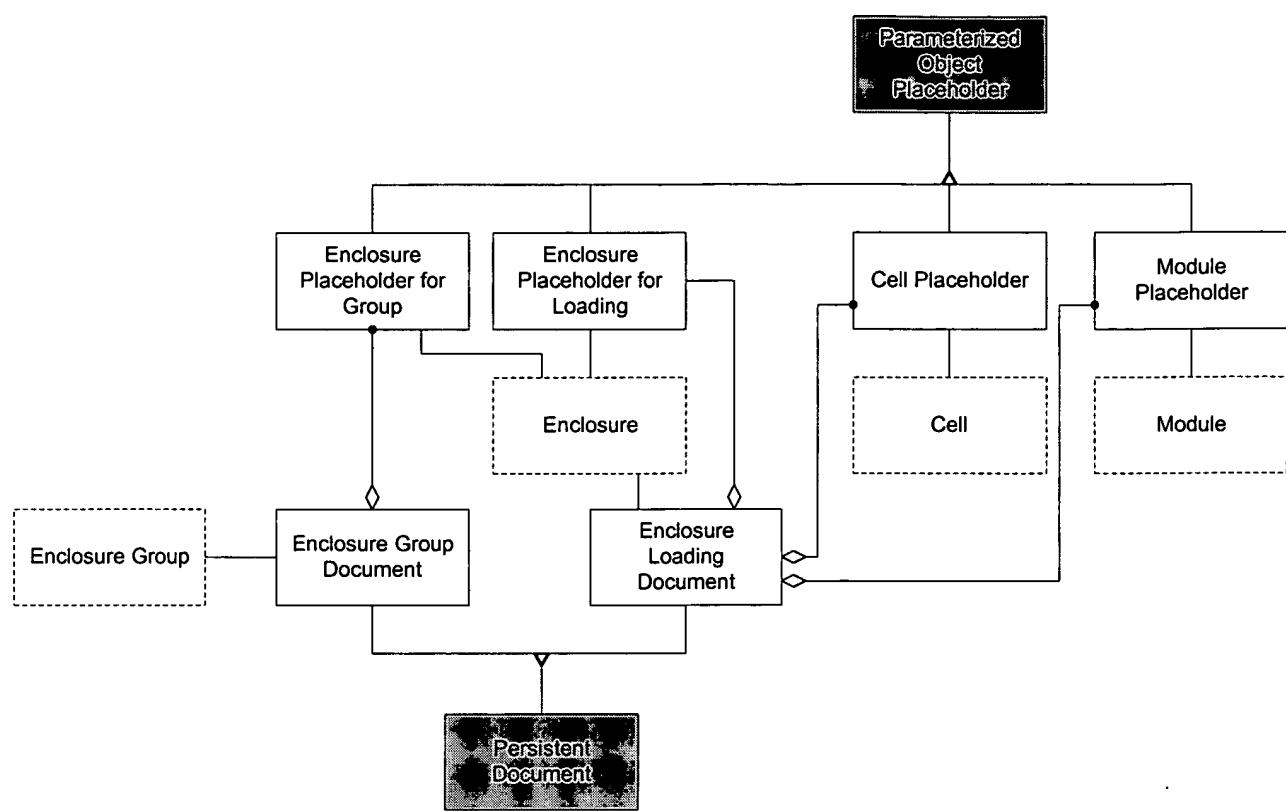


Figure 118 - Persistent Document Objects.

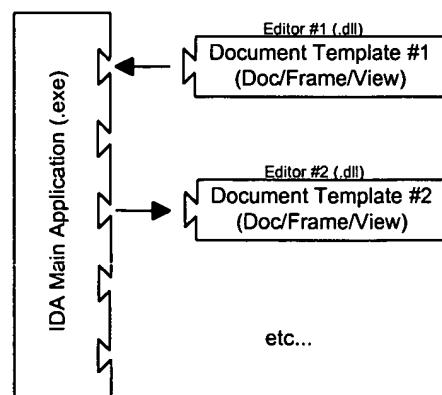


Figure 119 - IDA Main Application Architecture

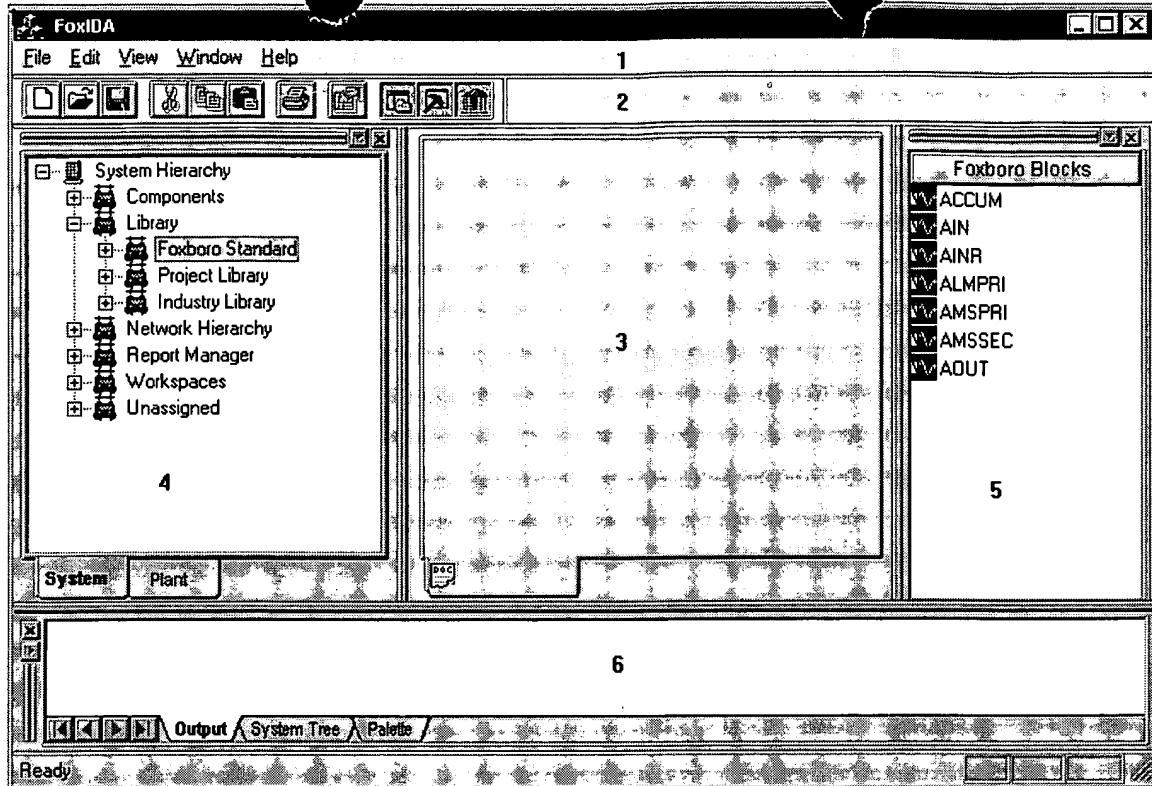


Figure 120 - Typical IDA Generic Editor Frame

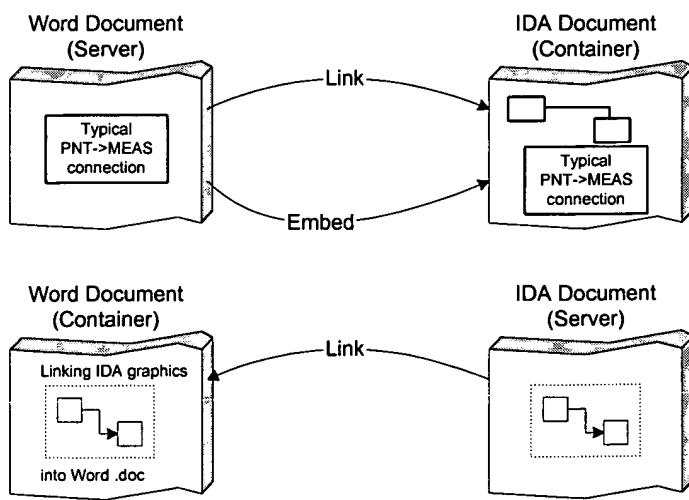


Figure 121 - IDA & OLE Compound Documents

WORD.3033631.4

E K 0 4 4 2 0 0 7 7 9 U S